



DEPARTMENT OF STATE

Washington, D.C. 20520

NSC UNDER SECRETARIES COMMITTEE

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NSC-U/DM-7A

December 4, 1974

TO: The Deputy Secretary of Defense
 The Assistant to the President for
 National Security Affairs
 The Director of Central Intelligence
 The Chairman of the Joint Chiefs of Staff
 The Chairman, Atomic Energy Commission
 The Director, Arms Control and Disarmament
 Agency
 The Director, United States Information
 Agency

SUBJECT: US Nuclear Non-Proliferation Policy

The Chairman has forwarded the attached memorandum to the President. A copy is hereby provided for your information.

Wreatham E. Gathright
Staff Director

Attachment:

As stated

DOE & STATE Reviews Completed

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THE DEPUTY SECRETARY OF STATE
WASHINGTON

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MEMORANDUM FOR THE PRESIDENT

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NSSM 202 directed a review of present U.S. policy concerning non-proliferation and the Non-Proliferation Treaty (NPT) in light of the Indian nuclear test. A recently updated NSSM 156 study is a companion paper that focuses on the specific options open to us in dealing with India. The policy decisions in NSDM 255 concerning consultations regarding multilateral supplier controls over transfers of nuclear materials, technology, and equipment, have been taken into account in this review.

On the basis of the review done pursuant to NSSM 202, the Under Secretaries Committee, recognizing that the proliferation problem is at a crucial juncture, recommends an intensified program to inhibit the further spread of independent nuclear explosives capabilities. This program would exploit the common interest of many key countries in inhibiting proliferation by providing for concerted action. The U.S. could both support such action and, where appropriate, catalyze more effective international coordination.

The Under Secretaries Committee recognizes that we might only be able to delay further proliferation however determined our anti-proliferation efforts may be, but concludes that U.S. national security objectives can be served even with a non-proliferation strategy that is only partially effective. It would be desirable

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to defer the disadvantages associated with an expanded number of nuclear powers as long as possible, while seeking to create conditions which might ultimately check such expansion.

In the short run, the most effective approach to slowing down the spread of nuclear weapons is for the advanced nuclear industrial states to tighten controls on weapons-usable material and related production capabilities. Proliferation can also be limited through maintaining and making more widely applicable the legal and political barriers to acquisition of independent nuclear explosives capabilities. In addition to the policy actions presented below, a successful non-proliferation strategy will be affected particularly by the confidence of non-nuclear weapon states that their security needs can continue to be met without recourse to independent nuclear forces. It will also be affected by perceptions of these states regarding progress in U.S.-Soviet nuclear arms limitations.

As a series of near-term non-proliferation steps, it is recommended that:

1. Through consultations with nuclear industrial states, particularly the U.S.S.R. and France, and a conference of such states, the U.S. should pursue coordinated policies designed to:

-- Ensure that international safeguards are both effective and widely applied to peaceful international nuclear cooperation by seeking to strengthen the political, financial, and technical base of the International Atomic Energy Agency (IAEA) safeguards program, and by requiring that such safeguards be placed on nuclear material and equipment exported by these states or material derived from these exports, at least to the extent indicated by the guidelines issued by the Zangger (Nuclear Exporters') Committee. Considerations should also be given to: (a) expanding these guidelines to cover sensitive nuclear technology and additional equipment; and (b) developing concerted policies to secure IAEA safeguards to the maximum extent possible on peaceful nuclear programs of non-nuclear weapons states who are not NPT parties.

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-- Restrict the spread of independent national uranium enrichment and chemical reprocessing facilities through: (a) reaching common principles regarding the supply of sensitive technology, equipment and assistance in the construction of national facilities; and (b) encouraging multinational plants (or bilateral plants involving the U.S.) capable of satisfying future world demands for reliable and economic commercial services in these fields. In this connection, non-proliferation considerations should be factored into U.S. policy decisions with respect to future availability and supply of uranium enrichment services.

-- Impose special conditions on nuclear exports to countries in sensitive regions, such as certain areas in the Middle East, in order to minimize the accumulation of plutonium and other special nuclear material. These conditions would include such provisions as requiring that reprocessing, storage and fabrication of plutonium derived from supplied nuclear material or equipment take place in mutually-agreed facilities outside the country or region in question. In the case of NPT parties, less stringent conditions should be arranged, if compatible with our overall non-proliferation interests.

-- Establish specific physical security standards to be included as a condition of nuclear cooperation, and strengthen international efforts to achieve widespread adoption and maintenance of meaningful physical security measures on nuclear material. In this connection, the U.S. should advocate that the IAEA be the forum for drafting a physical security convention.

-- Minimize the risk of indigenous "peaceful" nuclear explosive (PNE) development in non-nuclear weapons states not party to the NPT through: (a) seeking agreement by non-NPT parties that they will not in any way assist any NNWS to develop or acquire PNEs; (b) requiring explicit confirmation that nuclear material exported, or derived from the use of exports, will not be used for any nuclear explosives; and (c) establishing that all nuclear materials subject to IAEA safeguards may not be used for any nuclear explosives.

2. In conjunction with other NPT proponents, the U.S. should intensify efforts in support of the treaty and in seeking early ratification by key non-nuclear
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-- Request the spread of independent national uranium enrichment and chemical reprocessing facilities through: (a) reaching common principles regarding the supply of sensitive technology, equipment and assistance in the construction of national facilities; and (b) encouraging multinational plants (or bilateral plants involving the U.S.) capable of satisfying future world demands for reliable and economic commercial services in these fields. In this connection, non-proliferation considerations should be factored into U.S. policy decisions with respect to future availability and supply of uranium enrichment services.

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2. In conjunction with other NPT proponents, the U.S. should intensify efforts in support of the treaty and in seeking early ratification by key non-nuclear weapon states, through:

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-- Support for the FRG, UK, and other European countries in their high-level contacts with the Italian Government to convey both the importance of early NPT ratification and the relationships of such ratification to the ability of NPT parties to continue nuclear supplies to the European Communities.

-- High-level communications with the Japanese designed to remove any doubt about the continued importance of such ratification to the U.S. and other NPT proponents as an essential contribution to international stability and long-term progress toward nuclear arms control, and as helping to ensure a maximum role for Japan in international nuclear commerce and at the NPT Review Conference in May 1975.

-- Appropriate actions designed to achieve ratification by other prospective NPT participants, and encouragement of a common recognition by nations unlikely to adhere to the treaty in the near-term that the further spread of independent nuclear explosives capabilities endangers the security of all states.

-- Development of visible ways, consistent with the policies set forth in recommendation 1 above, in which preferential treatment could be given to NPT parties in such areas as: (a) the availability of commercial nuclear facilities, fuels, and technological support; (b) potential PNE services; and possibly (c) credit terms.

-- Taking a more positive stance with respect to implementing Article V of the NPT, but being prepared to highlight the limitations as well as the potential benefits of PNEs.* Without prejudging the scope of the future U.S. indigenous PNE program and bearing in mind that the U.S. program has been inactive for several years, this approach would involve: (a) participating more readily in selected studies of proposed PNE projects; (b) making clear our intention to meet our Article V obligations; and (c) supporting IAEA efforts to devise procedures for implementing PNE services, should such services appear warranted. On all these issues, consultations with the Soviets should

*This recommendation is presently being reviewed in the context of a more comprehensive study for the Verification Panel of U.S. policy regarding international aspects of PNEs.

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be held in an effort to develop common policies. The question of PNE services may well be affected by the outcome of negotiations with the Soviet Union on Article III of the TTBT. Evolving U.S. PNE service policy must be carefully coordinated with our test ban objectives to preclude taking actions that might, in view of the probable greater exploitation by the Soviet Union of peaceful nuclear explosives, place the U.S. in a relatively disadvantageous position with respect to nuclear weapons development and deployments.

3. Coordinated multilateral approaches should be developed to ensure that the Indian nuclear explosion does not hasten further proliferation in Pakistan and elsewhere, by:

-- Endeavoring to persuade India to place IAEA safeguards on its nuclear exports and not to export nuclear explosive technology or devices, or assist others in building national chemical reprocessing plants.

-- Seeking to dissuade India from undermining the NPT and to defer any further Indian explosive tests, particularly in the period prior to the Review Conference.

-- Avoiding the implication that India's status as a world power has been substantially enhanced as a result of its nuclear test.

-- Seeking to hold India to its peaceful protestations and to minimize the scope, pace, and military dimensions of its nuclear explosive program through Indian acceptance of such measures as: (a) accountability for weapons-usable material; (b) deferral of further PNE production and limiting it to specified current needs; and (c) international observation of PNE tests, recognizing that such observation procedures would not be expected to constitute a technically sound basis for distinguishing between PNEs and nuclear weapons.

-- Seeking Soviet and French cooperation, and the cooperation of other potential suppliers, in continuing not to supply India with long-range bombers or other sophisticated nuclear delivery capabilities.

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4. Appropriate interagency mechanisms should be established to formulate and oversee future U.S. non-proliferation policies, support relevant consultations and negotiations, and conduct necessary policy studies.

-- Prompt study should be undertaken of U.S. policy on implementing Article V of the NPT and PNE services generally in a manner consistent with our test ban objectives.

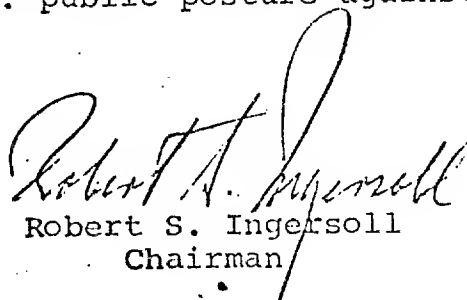
-- Urgent attention should be paid to further defining a U.S. policy on preferential treatment for NPT parties in such areas as fuel supply and technical assistance.

-- Studies should be made of sanctions as a deterrent to proliferation, measures which should be taken to assure the credibility and effectiveness of IAEA safeguards, the use of financing as a supplementary vehicle for imposing safeguards conditions on nuclear exports, and the possibility of multilateral controls on sophisticated nuclear delivery systems.

-- A series of "country studies" should be launched to investigate in detail the factors affecting potential nuclear weapons decisions in key NNWS, the preferred strategy for deterring such decisions, and options for the U.S. in the event these states acquire independent nuclear explosives.

-- The question of how best to handle the problem of security assurances at the NPT Review Conference should be examined.

-- There should be consideration of further steps to maintain a strong U.S. public posture against nuclear proliferation.


Robert S. Ingersoll
Chairman

Attachments:

1. Executive Summary

Approved For Release 2002/05/23 : CIA-RDP81B00080R001600010016-7

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NSSM 202 STUDY

Executive Summary

U.S. NON-PROLIFERATION POLICY

In response to NSSM 202, the Under Secretaries Committee has prepared the attached study which reviews U.S. policy concerning non-proliferation and the Non-Proliferation Treaty (NPT). A NSSM 156 study, updated in light of the Indian nuclear test, is a companion paper that focuses on the specific options and courses open to us in our dealings with India.

Desirability and Feasibility of Non-Proliferation

Inhibiting the spread of nuclear weapons has been a consistent and important element of U.S. policy for the entire nuclear era. The basis for our non-proliferation interest is the assessment that the danger of nuclear war as well as world instability would significantly increase with an unrestrained spread of nuclear weapons. Acquisition of nuclear weapons would also give nations a sense of greater independence, thus complicating international diplomacy, diminishing American influence, and possibly eventually requiring extensive and costly restructuring of our defense posture. With additional nuclear weapons states (NWS), it would become more difficult to negotiate international arms control agreements, and progress in limiting the bilateral U.S.-USSR competition would be substantially complicated. Further spread of nuclear weapons would also provide increased opportunity for sub-national theft and blackmail. Finally, unless the risk that peaceful nuclear programs might be used to initiate weapons programs can be minimized, all nations will face security dangers and the continued expansion of nuclear power as a world energy source could be threatened.

The problem of preventing the spread of nuclear weapons and independent nuclear explosives capabilities is now at a crucial stage. Commercial nuclear power generation is coming into wider use throughout the world;

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as a result of the Indian nuclear test, other non-nuclear weapons states may rethink their decisions regarding the acquisition of nuclear explosives. We are in general entering a period when political barriers to proliferation appear to be weakening, given movements toward a multi-polar world and decreasing credibility with respect to security guarantees. These trends could adversely affect the future of the Non-Proliferation Treaty (NPT), through setbacks in the ratification process in Japan and the European Community countries, by reducing the longer-term efficacy of the treaty as a non-proliferation instrument.

Nevertheless, the Under Secretaries Committee has concluded that a policy aimed at deterring further proliferation can be effectively pursued without incurring significant political costs or risks. At the present time, virtually all non-nuclear weapon states (NNWS) lack either the capability or the motivation to produce a nuclear explosive device. This offers the opportunity to undertake policies aimed at inhibiting further nuclear proliferation through practical measures which can (i) restrict through safeguards requirements and export controls the availability to non-nuclear states of materials and equipment needed to produce a nuclear explosive device, and (ii) diminish the incentives which might influence NNWS to acquire an independent nuclear explosive capability.

The nuclear material, equipment, and technology needed to produce nuclear weapons are still available only from a limited number of suppliers who generally oppose proliferation. Although it is essential that our supplier position and diplomatic influence be brought to bear, the U.S. cannot by itself establish an effective and durable non-proliferation regime. Such a program requires intensified concerted action, building upon existing international and multilateral mechanisms, to exploit the common non-proliferation interests of key NWS and NNWS.

The USC recognizes that we might only be able to delay further proliferation, however determined our anti-proliferation efforts may be, but concludes that U.S. national security objectives can be served even with a non-proliferation strategy that is only partially effective. It would be desirable to defer the disadvantages associated with an expanded number of nuclear powers

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as long as possible, while seeking to create conditions which might ultimately check such expansion. At the same time, prudence dictates that the U.S. should begin to explore the problem of how to shape our security posture in a world environment of larger numbers of independent nuclear states as a means of hedging against the failure to contain fully the further spread of nuclear weapons capabilities.

This study emphasizes concerted efforts designed to curb the spread of nuclear weapons, consisting of concrete actions to contain technical capabilities; to strengthen legal, political, and security barriers; and to deal with the special issue of peaceful nuclear explosives (PNEs). These measures, which are summarized below, involve reliance on certain basic functional tools, such as IAEA safeguards, export controls, and the NPT, as well as approaches tailored to key countries. However, the success of a non-proliferation policy will depend in large part on whether NNWS believe that their security and political needs can continue to be met without recourse to independent nuclear forces. It will also depend on their perceptions regarding progress in U.S.-Soviet arms limitations. Thus, our overall foreign and defense policy, the relative stability of regions of potential conflict in the world, and the general structure of peace in the international system have an important bearing on the longer-term prospects for limiting the spread of nuclear weapons.

Containing Technical Capabilities

All manufacturers of commercial nuclear equipment and material, except France (and potentially India), are either NPT parties or signatories moving toward ratification and support efforts to standardize safeguards applications. France has publicly declared that it will behave as if it were a party to the NPT, but it has apparently been lax in practice in adhering to this position in its nuclear export policy and has been reluctant to cooperate with other suppliers in developing export guidelines. There are signs, however, that the new French Government, which is engaged in a review of its international policies, might be more forthcoming in its approach to nuclear safeguards and export controls. Although this generally favorable situation will deteriorate to some extent in coming years, as NNWS acquire

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greater technical capabilities, it provides potential leverage for limiting the availability of weapons-usable material and technologies through export controls and international safeguards. Despite its apparent negative thrust, this approach can benefit all users of peaceful nuclear energy by permitting material and equipment to be made available within a framework of credible and effective safeguards controls. Furthermore, selective controls over international transfers of delivery vehicles and related technologies could be effective in dissuading certain major powers from embarking on an independent nuclear arms program.

The U.S. is still the dominant international supplier of nuclear power plants and fuel, but our leverage in the international commercial nuclear field is diminishing. Loss of U.S. dominance in the peaceful nuclear area could allow customers to deal with other suppliers who impose less rigorous controls on sensitive material, equipment, and technology. Accordingly, there is now an urgent need to upgrade our safeguards and control policies and to consult with other nuclear suppliers on this matter.* Although informal contacts and the use of existing multilateral mechanisms should continue to be pursued, a conference of nuclear industrialized states would provide a unique opportunity for realizing such a coordinated approach. Preceded by bilateral discussions as appropriate, a restricted conference attended by the major current and potential nuclear suppliers, namely the US, France, the USSR, the FRG, Japan, the UK, and Canada, would appear to be a desirable step that could later lead to a broader conference which included other nuclear industrial states or nuclear material suppliers.

Soviet and French support for a nuclear suppliers conference would be crucial and would dictate the need for advance consultations with both countries. Of particular concern are the potential adverse reactions to such a conference of non-participants, especially importers of nuclear material who may fear a suppliers' cartel. Therefore, in laying the groundwork for the

*NSDM 255 authorized consultations with other nuclear suppliers with the aim of minimizing risks of commercial nuclear transfers of sensitive material and technology.

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suppliers conference, it should be emphasized that establishing a reliable and widely accepted international control system is necessary to ensure the continued availability of commercial nuclear material under conditions which will not endanger the security of any country, and is therefore an objective which should be shared by consumers as well as suppliers.

The most important substantive non-proliferation objectives to be achieved in a program of consultation and coordination among commercial nuclear suppliers can be summarized as follows:

1. Ensure that IAEA safeguards are applied as a condition to exports of nuclear equipment and material to NNWS who are not NPT parties, and strengthen the political, financial, and technical base of the IAEA's safeguards program. Of immediate importance would be gaining widest possible acceptance of the Zangger Committee export guidelines as well as agreed procedures for codifying, implementing, and modifying these guidelines. Consideration should be given to expanding these guidelines to cover sensitive nuclear technology and additional equipment. Of particular importance in this regard is a high-level approach to the French to gain their cooperation. Efforts should also be made to assure that detailed IAEA safeguards provisions negotiated with NNWS are adequate, to increase support in the areas of inspector training and verification techniques, and to investigate alternative contingency schemes for IAEA financing, with supplier countries assuming a greater share of this burden. In dealing with NNWS not bound by the NPT requirement to subject all their nuclear facilities to IAEA safeguards, supplier nations should explore the prospect of developing concerted policies to require, as a condition for assistance on particular projects, that international safeguards be accepted on as large a proportion as possible of a recipient's peaceful nuclear facilities.

2. Seek to limit the number of independent reactor fuel reprocessing facilities and attempt to control the spread of independent uranium enrichment plants and technology. Since multilateral plutonium reprocessing plants could offer considerable economic advantages, we could urge that construction of national plants and exports of relevant technology be deferred pending

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international consultations on how best to meet future reprocessing requirements consistent with non-proliferation objectives. Solutions could involve constructing regional multinational plants and offering favorable terms for reprocessing services to smaller countries. The U.S. should encourage multi-lateral plants (or bilateral plants involving the U.S.) capable of satisfying future demands in these fields. Discussion with the UK-FRG-Netherlands centrifuge association and the French EURODIFF organization, as well as within the Energy Coordinating Group (ECG), should be aimed at encouraging multinational ownership of enrichment plants and policies of maintaining tight controls on transfers to other countries of centrifuge and other sensitive enrichment technologies. Construction of a fourth enrichment plant, possibly with foreign financial participation, to reduce the economic incentive for additional foreign plants and other non-proliferation considerations should be factored into U.S. policy decisions with respect to future availability and supply of uranium enrichment services.*

3. Obtaining agreement to place special conditions on nuclear exports to nations in sensitive regions. If common criteria could be developed, the accumulation of plutonium and highly-enriched uranium in sensitive areas could be precluded or at least delayed. Understandings should be reached to support the types of special conditions included in the proposed U.S. reactor and fuel sales to Egypt and Israel, which include such provisions as requiring that derived plutonium be reprocessed and stored outside the area in question. It would also be useful to gain consensus to apply special conditions not only to requests from other Middle East states, but also to countries in other troubled or unstable areas of the world to be addressed on a case-by-case basis. This policy should, however, give due weight to whether the recipient is an NPT party and, in such cases, less stringent conditions should be arranged, if compatible with our overall non-proliferation interests.

*An interagency study on future U.S. enrichment policy options is currently underway, as called for by NSSM 209.

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4. Developing common standards for improved physical protection of nuclear materials in use, storage, and transit. This would involve supplier agreements to include physical security criteria in exports of nuclear material. Consultations on this issue should involve discussions on the technical aspects of the physical security problem, procedures for strengthening and maintaining protective measures, and concerted arrangements pertaining to thefts and recovery of nuclear materials. This could be reinforced and broadened by an international convention on physical security to be drafted under IAEA auspices.** It will be necessary to examine carefully the projected cost of physical security measures that we propose to be adopted, the means of paying for them, and how the efficacy of the measures can be verified.

Among the additional possible issues to be considered for cooperative efforts are:

-- Common agreements to include safeguards requirements, special conditions on disposition of plutonium, and physical security criteria in loan covenants issued by Ex-Im banks for the financing of commercial nuclear facilities.

-- Arrangements among major suppliers to develop agreed selective export criteria for certain classes of nuclear delivery vehicles and critical components or technologies.

PNEs and Non-Proliferation

The Indian nuclear test focussed attention on the proliferation implications of PNEs. Notwithstanding Indian claims to the contrary, a nuclear explosive device, regardless of its intended purpose, can be used as a nuclear weapon, and the technology for making such devices for peaceful purposes is indistinguishable from the technology for making nuclear weapons for a country in an early stage of nuclear explosives development. This

*See "Study of Provisions for an International Convention Concerned with Physical Guidelines" submitted to the President as called for under NSDM 255.

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view is consistent with the NPT and is shared by the UK, Canada, over a dozen nations participating in the multilateral Zangger (Nuclear Exporters') Committee, and the IAEA Director General. U.S. objectives in bilateral negotiations with the Soviets pursuant to Article III of the Threshold Test Ban Treaty (TTBT) are intended to ensure that PNEs would be for bona fide peaceful applications, would not provide weapons-related information, and would not be used to circumvent the restrictions on nuclear weapons testing inherent in the agreed threshold test ban. Any agreements reached as a result of these negotiations should be formulated to avoid compromising the position that there is no distinction between PNEs and nuclear weapons, as defined above.

The feasibility and economic utility of PNE applications have not yet been satisfactorily demonstrated in the United States. The Soviets, on the other hand, have an active PNE program and claim to have reached the point of practical applications. Apart from the potential value of PNEs in peaceful applications, there are a number of NNWS not parties to the NPT who may be tempted for prestige purposes to demonstrate a nuclear weapons capability with a PNE cover. Therefore, assurances in Article V of the NPT that any potential benefits of PNE applications would be made available to non-nuclear weapon parties at the lowest possible cost, which were designed to help deter independent PNEs and gain treaty support, should not have been expected to lead all NNWS to give up the option of proceeding with indigenous programs. Nevertheless, although the interest of NNWS in PNEs has been limited, some NNWS contend that the U.S. and Soviet Union have not fulfilled the expectations engendered by Article V.

The range of options open to a state that is interested in PNE applications is rather narrow. If it is an NPT party, its only recourse is to obtain such services from the U.S. or the USSR or to obtain them from the French (who have not developed this technology very far) or the Indians (who will have, at best, a very limited capability for some years). If the NNWS is not an NPT party, it can still seek services from the nuclear weapon states to develop its own indigenous PNE capability.

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Some bilateral agreements for peaceful nuclear co-operation and many IAEA safeguards agreements contain a "PNE loophole" insofar as they do not specifically preclude the use of the nuclear materials involved for PNEs. This is not a problem where the recipient is a party to the NPT, since such a recipient is bound by the treaty not to manufacture or otherwise acquire any nuclear explosive device. But where the recipient is not a party to the NPT (as in the cases of Brazil and Argentina) further assurances would be needed, especially in view of disputes that have already arisen. In an effort to close the "PNE loophole", efforts have been made by the U.S. to obtain from certain NNWS an explicit confirmation that materials associated with American-supplied reactors will not be used for any nuclear explosive purpose.*

The Indian explosion adversely affected non-proliferation by strengthening the hands of NPT opponents in key NNWS where ratification is pending, making the indigenous PNE route look more attractive as a means of entering the "nuclear club", and raising the issue of India possibly contributing to proliferation through PNE assistance or unsafeguarded nuclear exports. Real or perceived movement by India towards a direct military program can exacerbate proliferation problems, regionally and worldwide. Some countries, particularly Japan, view the lack of a strong U.S. and USSR response to the Indian test as having contributed to a weakening of the NPT and non-proliferation barriers generally. Acceptance of the Indian decision, suddenly treating India as an advanced nuclear state, or condoning its "peaceful uses" rationale could have the effect of encouraging other nations to follow the Indian example. Strong measures directed against the Indian nuclear program on the other hand, might create resentment on the part of the Indians which could harm non-proliferation efforts by making more difficult our efforts to deter the Indians from expanding their nuclear explosives program and to induce them to adopt a stance of requiring

*In the case of the Tarapur reactor in India, the parties confirmed that any use of material in excess of fuel cycle requirements must be approved by the United States.

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safeguards in their nuclear exports position.

A proposed U.S. PNE policy consistent with non-proliferation should consist of the following elements:

1. Ensure that all civil nuclear cooperation and safeguards agreements preclude the development of PNEs. This would involve common steps by nuclear suppliers to close any PNE "loophole" in bilateral agreements, particularly with non-NPT parties, through obtaining specific confirmation by recipients that nuclear material and equipment will not be used for any nuclear explosives. This approach should also involve implementing the agreed Zangger Committee position on precluding PNEs and supporting interpretations presented by the IAEA Director General that non-NPT Agency safeguards preclude PNEs.

2. Take a more positive stance with respect to implementing Article V of the NPT, but be prepared to high-light the limitations as well as the potential benefits of PNEs.* This approach is aimed at (a) reducing the likelihood of charges that we are not fulfilling our obligations to provide services, while, at the same time, (b) minimizing the danger that encouraging the use of PNEs could stimulate independent programs. Without prejudging the scope of the future U.S. indigenous PNE program and bearing in mind that the U.S. program has been inactive for several years, this approach would involve participating more readily in studies of proposed PNE projects and of making clear our intention to meet our Article V obligations. In this connection, we should consult with the Soviets, in an effort to develop common policies, and support IAEA efforts to devise procedures for implementing PNE services, should such services appear warranted. A particular issue to be resolved is how to provide preferential treatment to NPT parties, since to do so would increase the incentive to join the treaty but at the same time could lead some NNWS remaining outside the

*This recommendation is being addressed in detail in the context of an ongoing interagency study for the Verification Panel of U.S. international PNE policies.

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treaty to pursue national PNE programs. One approach to this problem which should be studied would be to adopt a policy of agreeing to provide potential PNE benefits to non-NPT parties which officially eschew independent PNEs under less favorable terms than to NPT parties. The question of PNE services may well be affected by negotiations with the Soviet Union on Article III of the TTBT. Evolving U.S. PNE service policy must be carefully coordinated with our test ban objectives to preclude taking actions that might place the U.S. in a relatively disadvantageous position with respect to nuclear weapons development and deployment, in view of the probable greater exploitation by the Soviet Union of peaceful nuclear explosives.

3. Seek to reduce the risk that the Indian nuclear explosion will lead to further proliferation in Pakistan and elsewhere.* While it is not possible to prevent India from pursuing a nuclear explosive program, the U.S. and other concerned nations should attempt to hold India to its peaceful declarations through acceptance of measures designed to minimize the scope, pace, and military dimension of its program. Specific proposals to accomplish this goal would include: external accountability for India's weapons-grade material; selective monitoring of reprocessing and plutonium storage facilities not otherwise subject to safeguards; international observation of PNE tests; and delay of planned explosions.** We do not expect India to join the NPT, and, from the non-proliferation standpoint, this would be unwise since it would require amending the treaty and result in legitimizing a third category of "PNE states." But we should seek to dissuade the GOI from actively attempting to undermine support for the treaty, particularly in the period prior to the May

*See NSSM 156 (revised) and the NSSM 202 study (Section V) for a full discussion of this question and the options available.

**These procedures would not be expected to constitute a technically sound basis for "distinguishing" between PNEs and weapons. There is a danger that such procedures might be seen as legitimizing PNEs in India, thereby encouraging indigenous PNE development by NNWS, such as Pakistan, Argentina, and Brazil. . .

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1975 Review Conference. India should also be influenced to place IAEA safeguards on its nuclear exports, not to export PNE technology or devices, and not to assist others in building reprocessing plants. Finally, the U.S. should approach the Soviets, the French, and other potential suppliers to cooperate in not providing India with sophisticated nuclear delivery systems (long-range bombers and ballistic missiles), recognizing that India already has some means of delivery available.*

4. Make certain that our policies relative to the TTBT and the LTBT remain consistent with our non-proliferation policy. Procedures that might be negotiated permitting U.S. and Soviet PNEs, which would be applicable only to the U.S. and the USSR in the context of TTBT provisions limiting weapon tests, could be seen as providing undesirable precedents for "legitimizing" indigenous PNEs in relation to NNWS and India. Therefore, as discussed above, the U.S. and the USSR should design and publicize TTBT procedures in such a way as to counter these tendencies. If the Soviet pursue the question of modifying the LTBT to permit significant excavation projects which could lead to a wider range of PNE services, under Article V of the NPT, we should recognize that such a step could increase interest in independent PNEs and weaken an existing, effective nuclear arms control accord.

Strengthening Legal, Political, and Security Barriers

Over the long term, attempts to deal with the proliferation problem through nuclear safeguards and physical controls alone will not be sufficient. Continued effectiveness of our non-proliferation strategy will depend increasingly on the success of multilateral efforts to strengthen political, legal, and security barriers.

The NPT plays a central role in this connection, since it provides a recognized and reinforcing international

*In approaching the Soviets on this question, the U.S. would make no compromise on its basic position of rejecting non-transfer proposals put forth by the USSR at SALT.

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mechanism for nations to codify national decisions to eschew independent nuclear explosives, and creates a uniform structure for applying safeguards through both supplier and receiver obligations. The treaty has also been a focus for U.S.-Soviet cooperation in the non-proliferation field. There are presently 83 parties to the NPT and 23 other signatories. The Indian explosion set back ratification prospects in certain key signatory states (notably Japan and Italy). Ratification by these countries, particularly prior to the Review Conference, would contribute immeasurably to the continued viability of the NPT. Without these ratifications, other potential parties would be less likely to join, and parties to the treaty as well as strong supporters might lose interest. While the treaty is only one non-proliferation vehicle, any further major blow to it would make it much more difficult to prevent nuclear proliferation through other devices.

The forthcoming NPT Review Conference may represent an opportunity for the U.S. to further its non-proliferation objectives and to institute some of the strategies proposed in this study. However, our understanding of the attitudes of the other participants is far from complete at this time, and it is not inconceivable that we may find ourselves on the defensive in the Conference over questions such as the lack of CTB and SALT progress.

In order to encourage wider adherence to the Non-Proliferation Treaty, the following steps should be taken:

1. Reaffirm high-level U.S. support for the NPT and encourage adherence by important non-parties. This would include approaches to Japan, Italy, and possibly the FRG, as well as to other non-parties such as the Dutch, Belgians, Spaniards, South Africans, and South Koreans. Specific U.S. approaches would be in concert with other NPT proponents as applicable, for example in supporting FRG and UK contacts with the Italian Government to highlight the importance of early ratification for continued nuclear supply to the European Community. To Japan, the U.S. and others should stress ratification as an essential contribution to world stability and as helping to ensure a maximum role for Japan in international nuclear commerce and

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at the NPT Review Conference. In connection with the latter, U.S. policy should seek to assure that the NPT will be seen as contributing to international security with the prospect of more accessions. While early NPT ratification by such nations as Egypt and Israel or Brazil and Argentina remains unlikely, efforts should be made to encourage common recognition by these states that the acquisition of nuclear weapons or independent explosives devices can endanger regional and global security.

2. Complete negotiations with IAEA before the end of 1974 on the standing Presidential offer of a safeguards agreement covering selected U.S. commercial nuclear facilities. Implementation of the offer would reduce discrimination concerns and demonstrate that the U.S. is not seeking competitive advantage over other NNWS in the international market, and would help induce industrialized nations in particular to adhere to the NPT.

3. Add to the benefits which NPT adherence bestows in such areas as the availability of commercial nuclear facilities, fuels, and technology support. Additional measures worth considering would be: preferential treatment with respect to future enriched uranium supply services; announcing publicly that NPT status will be an important factor in the export of HEU (per NSDM 235); consideration of favorable finance terms for NPT parties; and exploring preferential treatment in the field of PNE services, consistent with Article V of the treaty.

Longer-Term Issues

Decisions to acquire nuclear weapons will ultimately rest on an assessment of self-interest taking into account security, political, and economic factors. Therefore, an effective non-proliferation policy must seek to decrease the motivations of other nations to translate whatever technical capabilities may be available into a decision to develop nuclear explosives. This approach is perhaps more difficult and elusive than attempts to contain capabilities or to seek wider adherence to the NPT, since the factors affecting nuclear explosives decisions vary from country to country

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and are extremely complex, but the elements of such a longer-term strategy can be identified.

Consistent with Article VI of the NPT, it will be important to maintain a credible balance of obligations between NWS and NNWS through further progress in limiting nuclear tests and reducing strategic nuclear forces. Comprehensive or low threshold test bans, consistent with overall U.S. national security interests, could support non-proliferation by increasing general inhibitions against nuclear testing and constraining nuclear weapons developments, as long as they preclude unverified independent PNEs. Nuclear free zones can provide regional limitations against nuclear proliferation, and can be given U.S. support as long as they meet our criteria of local initiative, adequate participation and verification, and no unilateral military advantage.

NNWS security concerns can be approached in a number of interrelated ways: through security commitments and assurances (e.g., NATO, the U.S./Japan mutual security treaty, or the trilateral assurances to NPT parties under UN Security Council Resolution 255); through military assistance and deployments, usually in the context of these commitments; and through efforts to put greater stress on the limited military utility of nuclear weapons. Many NNWS, particularly Pakistan, would like evidence of more solid NWS support against nuclear threats, but any such support from the U.S. would be subject to strong Congressional constraints. In terms of security concerns, the following policy lines should be considered:

- include non-proliferation considerations in decisions on security commitments and military assistance;

- consider strengthening the existing U.S.-USSR-UK trilateral security assurances (for example, by making explicit the possibility of assistance or action on behalf of a threatened NNWS in case of a deadlock in the Security Council);

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-- and seek support of the nuclear powers (and India) for parallel undertakings regarding nuclear weapons use (such as non-use against any NNWS that is not engaged in aggression assisted by a nuclear power).

Nevertheless, there may well be states which remain motivated to develop nuclear explosives for prestige and possibly aggressive purposes. While there is no single prescription for dealing effectively with these cases, de-emphasis on the military and political utility of nuclear weapons; highlighting costs; technical difficulties and risks involved in a nuclear decision; avoidance of steps which appear to give special status to India as a result of its explosion; and pursuit of ways to give special international status and recognition to NNWS such as Japan would all be helpful. Finally, the longer-term utility and practicality of establishing prospective sanctions against potential nuclear powers should be studied, with a view to helping deter nations from moving in that direction.

Further Effort

The Under Secretaries Committee recommends that appropriate interagency mechanisms be established to: (a) formulate, coordinate, and oversee future U.S. non-proliferation policies; (b) support relevant consultations and negotiations; and (c) conduct necessary policy studies. On the latter point, a prompt study should be made of U.S. policy on implementing Article V of the NPT and PNE services generally in a manner consistent with our test ban objectives. Attention should also be paid to further defining a U.S. policy on preferential treatment under the NPT and to exploring the question of security assurances and limited non-use formulations. There should be studies of the question of sanctions as a deterrent to proliferation, what measures should be taken to assure that IAEA safeguards are credible and effective, the use of financing as a supplementary vehicle for imposing safeguards conditions on nuclear exports, and the possibility of multilateral controls on sophisticated nuclear delivery systems. A series of "country studies" should also be launched to investigate in detail the factors affecting potential nuclear weapons decisions in key NNWS, the

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preferred strategy for deterring such decisions, and options for the U.S. in the event these states acquire independent nuclear explosives. Finally, there should be consideration of further steps to maintain a strong U.S. public posture against nuclear proliferation.

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US NON-PROLIFERATION POLICY

Report of the
NSSM 202 Study Group

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NSSM 202 REPORT

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REPORT

National Security Study
Memorandum 202

U.S. NON-PROLIFERATION POLICY

In response to NSSM 202, this study reviews U.S. policy concerning non-proliferation and the Non-Proliferation Treaty (NPT) in particular, in light of the recent Indian nuclear test. A recently updated NSSM 156 study is a companion paper that focuses on the specific options and courses open to us in our dealings with India.

Fundamentally, we need to consider (a) whether our basic policy in opposition to the spread of nuclear weapons remains feasible as well as desirable, and (b) if so, what concrete actions can be undertaken at the political and technical levels to avoid (or at least minimize and delay) a further increase in the number of nuclear weapons states.

I. DESIRABILITY AND FEASIBILITY OF NON-PROLIFERATION

Inhibiting the spread of nuclear weapons has been a consistent and important element of U.S. policy for the entire nuclear era. Non-proliferation of nuclear weapons is now a policy goal for the United States, for most of its allies, most of its adversaries, and most non-aligned states. The basis for our non-proliferation interest is the assessment

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that the danger of nuclear war as well as world instability would significantly increase with an unrestrained spread of nuclear weapons. Acquisition of nuclear weapons would also give nations a sense of greater independence, thus complicating international diplomacy and diminishing American influence. If nuclear weapons competition among third countries developed, and if various nations or even subnational groups could threaten the United States with nuclear violence, our defense posture might require extensive and costly restructuring. With additional nuclear weapons states, it would become more difficult to negotiate international arms control agreements, and progress in limiting the bilateral US-USSR competition would be substantially complicated. Finally, further spread of nuclear weapons would provide increased opportunity for subnational theft and blackmail.

Technical developments will increase the importance but also the difficulty of deterring further nuclear proliferation in the coming decade. Nuclear power generation is coming into wider use throughout the world and US dominance as a commercial supplier is diminishing. Hence, nuclear materials will become available in an increasing number of countries and in increasing amounts, while the basic knowledge necessary to manufacture nuclear explosives has become more widely available. At the same time, we are entering a period when political barriers to proliferation could be weakened or collapsed. This is a period when the world is moving toward a multipolar

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world and changes in the perceptions of some concerning the reliability of security guarantees. Moreover, as a result of the Indian nuclear test, other non-nuclear-weapon states may revise their decisions regarding independent nuclear weapon or nuclear explosive programs.

The success of any non-proliferation policy cannot be guaranteed, and it would be prudent to study the problem of how to shape our security posture in a world environment of relatively large numbers of nuclear powers. Furthermore, many non-proliferation approaches could be costly, counter-productive, or in conflict with other U.S. foreign policy objectives.

Nevertheless, a strong case can be made that policies aimed at deterring further proliferation can be effectively pursued without incurring significant costs or risks. In any event, it seems certain that inaction or deemphasis of our policy at this time would increase the likelihood of additional nuclear weapons decisions. Four key factors support this judgment:

I. Many important non-nuclear weapon states (NNWS) do not have the capability to produce nuclear explosives, and it may be possible to keep them from acquiring such capability for a substantial number of years. With the possible exception of Israel, other countries among the more likely proliferators appear to be 3-10 years away from having the capability to conduct

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an initial test.* Countries such as Argentina, the Republic of China (an NPT party) and Spain would be in the near-term category, while those such as South Africa, Brazil, Egypt, Pakistan, and Iran (an NPT party) which are just initiating power programs, would be in the latter group. Despite its advanced nuclear power program, Sweden has apparently foreclosed its nuclear option in the near term due to a recent decision to forego construction of a reprocessing plant needed for extraction of plutonium. Japan, the FRG and Italy are in a special category -- they have advanced the potential to build large numbers of weapons within a relatively short period, but strong political inhibitions coupled with the U.S. security relationship make them unlikely proliferators in the near-term. (There have been reports, however, of a possible weapons program in Italy.) In general, for countries whose perceived military needs can be met by only a limited nuclear force, the time-scale for acquisition decisions is determined by their nuclear capabilities, whereas for countries with strategic military requirements, delivery systems appear to be the pacing factor.

2. The nuclear materials and equipment needed to produce nuclear weapons are still available only from a limited number of suppliers who generally oppose proliferation. The nuclear

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materials that would have to be used by a NNWS to manufacture nuclear explosives are plutonium or U-233, each of which must be produced in a nuclear reactor and then reprocessed in a chemical separation plant, or highly-enriched uranium (HEU) produced in enrichment facilities.* All present manufacturers of nuclear reactors, except France and India, are NPT parties or signatories apparently moving toward ratification -- as are all states, again with the exception of France, that are currently engaged in supplying uranium enrichment services or in commercial chemical reprocessing for other countries. France has publicly declared that it will behave as if it were a party to the NPT, but has in practice been lax in adhering to this position in its nuclear export policy. (India is several years from completing its first two indigenously built reactors and several more years away from exporting such facilities.) While this general situation will deteriorate to some extent in coming years, it provides potential leverage in limiting the availability of weapons-grade materials and technologies through nuclear export controls and safeguards.

*U-233 is, in general, the least likely of the three alternatives to be selected by a potential Nth country because there has been relatively little experience in working with this material and it is more difficult to handle than HEU or Pu. Countries with thorium reserves, however, might consider this alternative.

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Selective controls over international transfers of delivery vehicles and technologies could be effective in dissuading certain major powers from embarking on an independent nuclear arms program.

3. Many nations with advanced nuclear capabilities may choose not to exercise the nuclear option for political, security, or legal reasons. In Japan, the GOJ plans to ratify the NPT appear to be moving back on course, in spite of earlier setbacks; strong political inhibitions, concern with the dangers of further proliferation, and interest in maintaining close ties with the US, and the dependence of a large portion of its electric power industry on continued US nuclear fuel suppliers, will all work against a nuclear weapons decision and in favor of eventual NPT ratification. In the FRG, bound by the Brussels Treaty and the European security context, there have been no indications of a serious desire to develop a national nuclear weapons capability and here too there is considerable dependence on continued US nuclear fuel supplies. Furthermore, almost all nuclear material and facilities that have been sold to NNWS are safeguarded. Consequently the use of nuclear materials or facilities for military weapons purposes would involve the political and legal costs of abrogating an agreement or

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risking discovery of a clandestine program. For non-NPT parties, the route taken by India in exploding a "peaceful" device (PNE) is not presently subject to strict legal or meaningful political curbs, but measures are available to narrow the PNE "loophole".

4. U.S. national security objectives can be well served even with a non-proliferation strategy that is only partially effective. We might only be able to delay further proliferation, however determined our anti-proliferation efforts may be. Nevertheless, it would serve our interests to defer the disadvantages associated with an expanded number of nuclear powers as long as possible, while seeking to create conditions which might ultimately check further spread and planning an approach for minimizing the instabilities of a more proliferated world. Furthermore, the identity and character of potential additional new nuclear states have important and different implications for the U.S. Whether a 7th or 8th nuclear nation were a friend or adversary and whether it would present a credible global threat, or largely a regional one (as in the case of India), would be important in terms of its direct effect on world stability and American interests, apart from its effect in increasing the risk of still further proliferation.

In short, although the Indian test has represented a set-

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back for the objective of non-proliferation, strong arguments can be made that:

-- it is still in the U.S. interest to strive vigorously to abate the further spread of nuclear weapons;

-- we may still have time and influence to deter others from following suit; and

-- a number of effective techniques and options can still be usefully pursued to help dissuade or delay others from entering the nuclear weapons field.

For a state to develop its own independent nuclear explosives, it must have both the requisite capability and the motivation to pursue such development. In virtually all the important non-nuclear-weapon states (NNWS) there is at the present time a lack of one or both of these ingredients, as indicated in Tables I and II. This offers the opportunity to formulate a strategy that both strengthens political, legal, and security-related inhibitions against proliferation and denies nations the full range of materials, equipment, services, and technology needed to produce nuclear explosives. In addition, selective controls over international transfers of delivery vehicles and technologies could be effective in dissuading certain major powers from embarking on an independent nuclear arms program.

The US cannot hope, solely through its own actions,

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to establish an effective and durable non-proliferation regime; concerted international policies are needed to reach this goal. Accordingly, a central component of our non-proliferation strategy must be to support existing multi-lateral efforts and to devise additional cooperative actions among concerned nations aimed at deterring the spread of nuclear explosive capabilities.

Three basic functional elements of a non-proliferation strategy are discussed in Sections II, III, and IV of the study: containing technical capabilities; strengthening legal-political constraints; and dealing with the special issue of peaceful nuclear explosives (PNEs). Given the need to work with other nations in pursuing a non-proliferation policy, Section V outlines objectives and the suggested nature and timing of approaches to those countries judged to be most urgent and important -- as suppliers, crucial potential NPT ratifiers, or potential proliferators requiring attention outside the treaty. (A discussion of India, drawing on NSSM 156 [revised], is included in this country-oriented section.) Conclusions and recommendations are offered in each section of the study as appropriate.

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TABLE I

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SECRETCountries Currently with Significant
Capabilities in Nuclear Field*

<u>Country</u>	<u>NPT Status</u>	<u>Exporter of Nuclear Materials</u>	<u>Apparent Attitude Toward going Nuclear</u>
Japan	Signatory	Yes	Against
Germany	"	Yes	"
Canada	Party	Yes	"
Italy	Signatory	Yes	"
Netherlands	"	Yes	"
Belgium	"	Yes	"
Sweden	Party	Yes	"
Spain	Non-signatory	Yes	No strong motivation
India	Non-signatory	Not Yet	Has exploded one nuclear device
Switzerland	Signatory	Yes	Against

*These also include all significant suppliers of nuclear equipment and services other than the US, UK, USSR and France, of which the first three are NPT parties and the last has declared that it would act as if were a party. Within the next decade, the following countries are also likely to fall in this category:

<u>Country</u>	<u>NPT Status</u>	<u>Exporter of Nuclear Materials</u>	<u>Apparent Attitude Toward going Nuclear</u>
South Africa	Non-signatory	Yes	Probably Against
Australia	Party	Yes	Against
Iran	Party	No	Against

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TABLE II

Countries with Possible Motivation
to Develop Nuclear Explosives

<u>Country</u>	<u>NPT Status</u>	<u>Capabilities</u>	25X6
Israel	Non-signatory	No large nuclear industry, but consider able technical knowledge;	<div style="border: 1px solid black; width: 100px; height: 20px;"></div>
	25X6	<div style="border: 1px solid black; width: 100px; height: 20px;"></div>	<div style="border: 1px solid black; width: 100px; height: 20px;"></div>
Egypt	Signatory	Long way to go; dependent on imports.	
Pakistan	Non-signatory	Long way to go; dependent on imports.	
Argentina (PNE)	Non-signatory	Modest, and still dependent on imports.	
Brazil (PNE)	Non-signatory	Modest, and still dependent on imports.	
South Korea	Signatory	Long way to go, and still dependent on imports.	
Republic of China	Party	Sizeable, but still dependent on import	
Libya	Signatory	Long way to go; dependent on imports.	

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II. CONTAINING TECHNICAL CAPABILITIES

Generally speaking, the key to whether a state can develop nuclear weapons is the availability of special nuclear material, since many important NNWS have the capability to build a rudimentary nuclear device but do not have the necessary special nuclear material free of international safeguards. Such safeguards are a primary tool in containing the technical capabilities of NNWS. International safeguards are aimed at increasing the risk that significant losses or diversion of nuclear material will be detected, thereby deterring a decision to acquire nuclear weapons and providing some assurance that material will be used only for legitimate purposes. These safeguards do not physically prevent diversion or the accumulation of special nuclear material. India's recent action, while sharpening the special PNE problem, did not call into question the efficacy of international safeguards, since there were no safeguards on the material utilized.

A. IAEA Safeguards

The most widely-applied international safeguards are those under the auspices of the International Atomic Energy Agency. IAEA safeguards applied pursuant to the NPT consist of verification by international inspectors that nuclear material in declared facilities is accountable and has not been diverted to nuclear explosive devices (i.e., peaceful nuclear explosives or to nuclear weapons.

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Non-NPT safeguards applied by the IAEA are aimed at assuring there is no diversion to "any military purpose", leaving some ambiguity as to whether material may be used for PNEs.*

In the event of abrogation or violation of safeguards agreements, material cannot be forcibly recovered by the IAEA, but the IAEA statute calls for the possibility of termination of nuclear aid by member states and does include "recovery" as a sanction. Apart from the IAEA response, the supplier country could decide to undertake countermeasures, such as suspension of nuclear fuel shipments, termination of all nuclear assistance, or broader types of economic sanctions. Canada, for example, halted nuclear cooperation with India in response to India's nuclear explosion on the grounds that use of plutonium derived from the CIRUS reactor contravened Canada's declared policy. Although sanctions against India have been weak, in this situation, as noted, there was no breach of an international safeguards agreement.

At the present time, most nuclear facilities in non-nuclear weapons states (NNWS) are covered by IAEA safeguards, and all but a few will be covered once the remaining EC NNWS adhere to the NPT. However, some states (such as Argentina and Brazil, who may now be joined by Pakistan) appear to be seeking independence from full safeguards. Safeguards are most

*See PNE discussion in Section IV below.

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effective when they apply to all the peaceful nuclear activities in the state, as they must in the case of all NNWS parties to the NPT and when they are required as a condition of export of the widest possible range of hard-to-acquire materials necessary for either explosives or weapons purposes. The NPT not only obligates NNWS who join it to accept IAEA safeguards on all their peaceful nuclear activities, but it requires all parties to place such safeguards on their nuclear exports to any NNWS, including non-parties to the treaty. The NPT also prohibits development or acquisition of indigenous PNE devices by NNWS who join it, and prohibits its NWS parties from assisting any NNWS to acquire such indigenous devices.

With wider NPT adherence by suppliers and recipients, the number of unsafeguarded facilities in the world could be held to a minimum. But some nations with commercial nuclear power needs are not expected to join the treaty in the near-term, for a variety of security and political reasons. Thus, efforts must also continue to be made outside the NPT framework to ensure that IAEA safeguards are applied to commercial nuclear transactions with NNWS. At the very least, safeguards must be included as a requirement for specific projects involving transfers of special nuclear material, reactors, and other facilities or equipment used to fabricate or process such material. However, it would clearly be useful for suppliers to attempt to make acceptance of IAEA safeguards on all peaceful nuclear facilities a prerequisite for nuclear cooperation with NNWS not party to the NPT. In the case of the proposed reactor sales to Egypt and Israel, the US is seeking a commitment from both countries to place future peaceful nuclear material or equipment imported from any source under IAEA safeguards.

International safeguards must be effective if they are to provide valid assurance that international commerce in nuclear material and equipment is not contributing to proliferation. Due to the unprecedented nature of this system of international controls, the IAEA's safeguards program has a continuing need for support and development assistance in areas such as: technology, administration, logistics, procedures, training, and financing. Based on its past and current experience in nuclear energy, the United States is uniquely qualified to provide assistance in these areas. Therefore, along with U.S. efforts to broaden the applicability of international safeguards in NNWS's the U.S. should mount a commensurate effort to help assure that those safeguards are credible and effective. For example, a coordinated effort is now necessary to assure that technically-sound and non-intrusive materials accounting, containment, and inspection measures can be applied by the IAEA to isotopic enrichment plants, reprocessing plants, and hard-to-monitor CANDU-type reactors being built in such critical locations as India, Argentina, Pakistan, and ROC.

Safeguards financing also poses a potential problem. Smaller states object to high IAEA safeguards spending, which they perceive to be at the expense of expanded technical assistance. At some point, it may be necessary for nations concerned with the proliferation threat to choose between providing some special or

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augmented financial support to the Agency, or abandoning effective IAEA NPT safeguards. Although it may involve a significant fraction of the Agency's total budget, it would presumably be only a modest amount in terms of actual dollars. A contingency study could be undertaken to assess the possible need for and feasibility of such special financial support.

B. Export Controls

A somewhat different approach to containing technical capabilities that can reinforce the safeguards approach is to use export controls to diminish the ability of non-nuclear weapons states to acquire nuclear materials or facilities relevant to a weapons or nuclear explosive program. Since the key to whether a state can develop nuclear weapons is less the basic knowledge of how to make a rudimentary nuclear explosive than access to weapons-grade material, denying such material to countries now without it is still one of the principal anti-proliferation measures available. Many important NNWS do not have the complete capability to produce material for nuclear explosives, and it may be possible to keep them from acquiring such a capability for some time.* For example, there are currently relatively few plants in NNWS capable of reprocessing plutonium from spent fuel rods -- an essential step in using this material to produce an explosive device --

*Pakistan and Brazil fall into this category, for example.

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and the only uranium enrichment plants associated with a NNWS are pilot plants operated under a joint UK-FRG-Netherlands enterprise. While such facilities may spread to additional states during the next decade, there are economic as well as security reasons for limiting the number of nationally owned enrichment and reprocessing plants in the world.

Recently US policies have been tightened to include controls over transfers of unclassified technology in such critical areas as reprocessing and enrichment, and, as formalized in NSDM 235, stringent criteria are to be applied in cases of requests to export large quantities of highly-enriched uranium (HEU). The US has also sought to place special conditions on sales of nuclear power reactors and fuel to Egypt and Israel. These conditions, which are being negotiated as part of our Agreements for Cooperation, include: omission of a commitment to consider transfers of highly enriched uranium; US rights to approve the location of fabrication and reprocessing facilities for, and storage of plutonium (e.g., insist on external storage); and commitments and consultations regarding adequate physical security. The purpose of these conditions is to reduce the danger of diversion or the risks of safeguards abrogation by keeping usable weapons-grade material out of each country and tightening physical protection measures. The proposed agreements also

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include a specific reference to the fact that peaceful nuclear explosives cannot be developed.

With the exception of the no-PNE commitment, the special conditions incorporated into the Egyptian/Israeli agreements would go beyond the restrictions and requirements contained in the NPT. In this case, IAEA safeguards would be placed on all peaceful nuclear facilities, but there would be no legal basis to deny the countries in question any legitimate commercial nuclear plant. Indeed, such a restrictive export policy would appear to contravene the intent of Article IV of the NPT which grants all parties the right to the "fullest possible exchange" of equipment and materials for the peaceful uses of nuclear energy. Thus, the concept of including special conditions in cooperative programs with NPT parties -- even if these states are in sensitive regions or judged to be internally less stable than other nations -- can tend to undermine the perceived efficacy of existing IAEA safeguards and call into question the benefits to be gained from joining the NPT. As in the case of a possible US agreement with Iran (an NPT party), however, it might be possible to establish a precedent of incorporating fewer special conditions for treaty members, while preserving this basic approach as a safeguards supplement.

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Concern over sabotage as well as sub-national theft of nuclear material by radical organizations, revolutionary groups, or crime syndicates is not limited to our proposed agreements with Egypt and Israel. As the commercial nuclear power industry expands and spreads, the opportunities for such actions will increase throughout the world. These scenarios can pose a serious threat to US security by raising international tensions, endangering American citizens or facilities abroad, and possibly leading to military conflict involving nuclear explosives or radioactive materials. Recognizing the global scope of this problem, an interagency study on a possible international convention has been completed.*

As an expanding number of LDCs seek commercial nuclear facilities and fuels to satisfy their power needs, financing will become a focal point for the spread of such equipment and materials throughout the world and could be used as a control tool. The US Eximbank is active in financing nuclear projects and its policies in this field have helped American industrial firms capture the bulk of the international nuclear

*"Study of Provisions for an International Convention Concerned with Physical Security Guidelines, and Transfer of Materials, Equipment and Technology." The study is currently being reviewed by agencies concerned prior to submission to the President.

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market. Eximbank's criteria for evaluating nuclear-related loan requests are generally limited to judgments regarding the technology viability and credit worthiness of a proposed project, and its legal authority to implement the following suggestions would have to be examined. The World Bank is willing to consider financing the nuclear power projects for less developed nations, but evaluates such requests in the context of overall economic and developmental impact.

It is likely that the World Bank will include as part of its loan covenants for nuclear power plants the requirement that funds be earmarked for purposes of ensuring that specified safety standards are met. It is also possible that loan covenants might cover physical security standards as well -- in an attempt to minimize the risks of nuclear theft. Additional covenants could cover restrictions on the location and disposition of plutonium and reprocessing plants. Finally, Eximbank, as well as the World Bank, could adopt a policy of weighing the NPT status of a nation requesting nuclear financing and giving preference to treaty parties. This could provide inducements to join the NPT. Where the terms of an Agreement for Cooperation are already fixed and no opportunity for renegotiation is available, the terms of the financing agreement provide a means by which such controls might be obtained.

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Although export controls and safeguards have a negative thrust, a vigorous US program of commercial nuclear cooperation with other nations can help maintain influence over foreign programs through proper safeguards, dependence on external supply, and the confidence of a constructive association in peaceful programs. In applying such a policy, we might encounter contradictory pulls -- notably in the inherent conflict between the desire to be more forthcoming toward certain countries with regard to peaceful uses of atomic energy and the need to tighten controls on the export of nuclear materials, equipment, and technology. Notwithstanding this dilemma, through Agreements for Cooperation with over 30 nations and export control regulations, the US has imposed safeguards on its nuclear exports while supporting the peaceful nuclear needs of other states. American light-water systems are the most widely-used reactor-type, and our position as a commercially attractive supplier of enrichment services has given us leverage to obtain appropriate safeguards and guarantees on our exports and to make dependence on us for periodic refueling of nuclear power plants a factor that helps enforce such undertakings.

C. Multilateral Supplier Cooperation

While the US is still the dominant international supplier of nuclear power plants and fuel, our leverage in

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the international commercial nuclear field is diminishing. Industrialized countries are constructing their own nuclear power plants and competing with us for reactor exports. Added to the Canadian heavy-water reactors are FRG, Japanese, and other light-water systems becoming competitive with ours. Foreign enrichment plants under construction (URENCO, EURODIF) as well as Soviet enrichment service arrangements threaten to seriously challenge our virtual monopoly in this field. Compounding this problem is the fact that existing US enriching plants have been essentially contracted to capacity and all long-term contracting has been suspended. It is official policy to look to US private industry to provide the additional increments of new enriching capacity which will serve domestic and foreign customers on a commercial basis, but an interagency review (NSSM 209) is now underway to re-examine this issue and to include, among other factors, the implications of various policy options for nuclear safeguards and non-proliferation.

Loss of US influence in the peaceful nuclear area could drive customers to deal with other suppliers who impose less rigorous controls on sensitive material or who sell natural uranium reactors which are not only more difficult to safeguard but which provide less leverage to prevent the acquisition of unregulated weapons grade material by

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eliminating dependence on enriched uranium supply. More generally, in the absence of uniform export policies, a degradation of safeguards standards or applications can undercut our ability to apply special controls on plutonium disposition or to seek acceptance of comprehensive IAEA safeguards as a condition of cooperation, and can undermine efforts to attain physical security requirements on materials involved in international transfers. In addition, to maintain our commercial position, we would need to develop common supplier criteria for including any special conditions on financing arrangements in the nuclear field.

It seems clear, therefore, that concerted action by all major nuclear suppliers is needed for an effective and durable regime of international safeguards and controls. Conversely, failure to achieve the cooperation of a major supplier will tend to defeat such a regime. A considerable foundation has already been laid for coordinated safeguards actions, and practical steps can be taken by the US, through its diplomatic influence and supplier position, to catalyze further multilateral efforts.

The recently-approved NSDM 255 authorized a US approach to other suppliers to facilitate the construction of multi-lateral reprocessing and enrichment plants, to develop common principles regarding exports of enrichment technology, to develop guidelines for exports to countries in sensitive

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regions, and to strengthen physical security measures against theft of nuclear materials.* A primary tenet of NSDM 255 is that the US should consider the active use of possible US technology sharing to direct the development abroad of enrichment capability. This is relevant to the establishment of the Energy Coordinating Group (ECG) as a forum for general discussion of guidelines for cooperation on uranium enrichment within a broad framework of energy cooperation. Suggested guiding principles on enriched uranium cooperation include avoidance of further proliferation or nuclear weapons and avoidance of "aggravation of international security concerns.**

Concrete progress has been made on nuclear supplier cooperation through the Zangger (Nuclear Exporters') Committee -- a large group of suppliers of nuclear material, equipment and technology with considerable potential leverage which has developed on the basis of consultations over the past three years, common minimum guidelines for determining which exports of nuclear material and equipment should "trigger" or require IAEA safeguards consistent with the NPT. The purpose of the group is to ensure that differences in the application of safeguards requirements by suppliers will not become a competitive matter at the expense of safeguards. A broad consensus has

*For details and analysis, see the NSDM 235 Action Plan, Under Secretaries Committee Study, March 3, 1974.

**See Report of the Ad Hoc Working Group on Enriched Uranium Supply, June 14, 1974

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been reached on these minimum guidelines, and the Soviets have indicated that they are prepared to abide by them. The basic guidelines have been issued, and members of the group have exchanged notes to give official assurance that their export practices are consistent with these guidelines.*

In seeking to develop an improved safeguards system through the Zangger Committee, a chief deficiency is the absence of French support. Indeed, at this stage, possibly the greatest single obstacle to effective multilateral export controls in the nuclear field seems to be the lack of cooperation by France. This is particularly serious because France is not an NPT party and can export practically the full range of nuclear materials and equipment.** In addition, the Zangger guidelines do not cover the export of some important materials, or (even more importantly), technology. These shortcomings might be rectified either in extending the "trigger list" to include assistance to sensitive fields such as enrichment and shipment of special metal alloys for use in reactor fuels; or to some extent by requiring that reactors supplied to non-NPT parties be accompanied by

*Committee participants have included: Australia, Canada, Belgium, Finland, the FRG, Italy, the Netherlands, Norway, Sweden, Switzerland, USA, UK, South Africa, Denmark, and Japan. See NPT Exporters' Committee Documents transmitted to the Department of State from US Mission IAEA (A-405), August 20, 1974.

**See Section V for a discussion of the role of France in export controls and the prospects for gaining French support in a coordinated safeguards program.

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agreement of the recipient to place under safeguards future reactors which use technology derived from the supplied reactor. Furthermore, given their connection with implementing the NPT safeguards clause, the guidelines do not restrict the export of uranium enrichment or chemical reprocessing facilities so long as they are safeguarded. Finally, the Committee's activities do not appear to have top political support of participating governments. In fact, Italy has indicated it is withdrawing its support in certain areas.

In view of the proliferation pressures arising from the Indian test and increased world interest in nuclear power, there is now an urgent need to expand and concert our control policies with other nuclear suppliers, even though arriving at common export guidelines with other suppliers will be difficult due to countervailing commercial pressures and may have limited value over time due to the growing availability of much nuclear technology. Consultations with other interested supplier governments have shown that the US is not the only nation currently concerned with the problem of preventing further nuclear proliferation through concerted actions designed to improve and standardize safeguards implementations. Recent discussions with representatives from Canada, the UK, and the FRG, in response to their initiatives, stressed this point.

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The substantive objectives to be achieved in a program of coordination among commercial nuclear suppliers can be summarized as follows:

1. Ensure that IAEA safeguards are applied to exports of nuclear equipment and material to NNWS, consistent with NPT requirements. Of particular importance would be gaining widest possible acceptance of an expanded set of Zangger Committee guidelines as well as agreed procedures for codifying, implementing, and modifying these guidelines. In this connection, it would be useful to expand efforts to provide the IAEA with information about international transfers of nuclear material. It would also be important to obtain a consensus on the need to extend multilateral export criteria to include sensitive unclassified nuclear technologies. Finally, supplier states should develop concerted policies to require as comprehensive safeguards as possible on a recipients' peaceful nuclear facilities as a condition for assistance on particular projects.

2. Strengthen the political, financial, and technical base of the IAEA's safeguards program. This would include efforts to assure that detailed safeguards provisions negotiated with NNWS are adequate to increase support in the areas of inspector training and verification techniques, and to explore the possibility of a permanent high-level international

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safeguards committee which would review the appropriateness and effectiveness of the IAEA's safeguards program. It would also be important to initiate studies to investigate alternative contingency schemes for IAEA financing, with attention to supplier countries assuming a greater share of this burden.

3. Seek to limit the number of independent plutonium reprocessing facilities. Since the major need for reprocessing and recycling reactor fuel by NNWS is several years off, and multinational plants could offer considerable economic advantages, we could urge that construction of national plants in countries such as Pakistan or Brazil, as well as assistance by supplier states in such construction, be deferred pending international consultations on how best to meet future reprocessing requirements. Solutions consistent with non-proliferation and the goal of furthering peaceful nuclear energy uses could involve regional multinational plants and offering favorable terms for reprocessing services to smaller countries.

4. Attempt to control the spread of independent uranium enrichment plants and technology. This would involve discussions with the UK-FRG-Netherlands centrifuge organization (URENCO) and the French, with a view toward encouraging multinational ownership or enrichment plants and maintaining tight

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controls on gas centrifuge technology. It would also involve measures to hasten the construction of the fourth US enrichment plant, preferably with financial participation by Japan and Iran, to remove the economic incentive for additional foreign plants. In this connection, non-proliferation considerations should be factored into the review of US policy with respect to future availability and supply of uranium enrichment services and be reflected in any change in the present policy regarding private ownership of future enrichment plants. The Energy Coordinating Group (ECG) can provide an effective forum for cooperation in uranium enrichment through resource sharing and export guidelines which can serve non-proliferation objectives.

5. Obtaining agreement to place special conditions on nuclear exports to nations in sensitive regions. If common criteria could be developed, the accumulation of plutonium and highly-enriched uranium in sensitive areas could be precluded or at least delayed. At a minimum, agreement should be sought to follow US policy on special conditions with respect to the proposed sales to Egypt and Israel. It would also be useful to gain consensus to apply special conditions not only to requests from certain other Middle East states, but also to countries in other troubled or unstable areas of the world to be assessed on a case-by-case basis. This policy should,

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however, give due weight to whether the recipient is an NPT party and seek to impose less stringent conditions in these cases.

6. Developing common standards for improved physical protection of dangerous nuclear materials in use, storage, and transit. This would involve supplier agreements to include physical security criteria in exports of nuclear material. Consultations on this issue should involve discussions on the technical aspects of the physical security problem, procedures for strengthening protective measures, concerted arrangements pertaining to thefts and recovery of nuclear materials, and distribution of the probable high costs of physical security arrangements. This could be reinforced and broadened by an international convention on physical security to be drafted under IAEA auspices.

7. Ensure that civil nuclear cooperation agreements preclude the development of PNEs. This would involve common steps to close any PNE "loophole" in bilateral agreements, particularly with non-NPT parties, through obtaining specific confirmations by recipients that material will not be used for any nuclear explosives. It also includes support for interpretations presented by the IAEA Director General that non-NPT agency safeguards preclude PNEs.*

*See Section IV for further discussion of PNEs, including the question of PNE services, and Section V for a discussion of the Indian test as it affects PNEs.

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D. Conference of Nuclear Industrial States

Although informal contacts and the use of existing multilateral mechanisms can be productive, our proposal for a conference of nuclear industrial states offers a unique opportunity for realizing a coordinated approach in placing effective controls, including safeguards and security measures, over transfers of commercial nuclear equipment and materials. Such a conference, attended by the major current and potential nuclear suppliers, namely the US, France, the USSR, Japan, the FRG, the UK, and Canada could contribute high-level momentum to multilateral control efforts, thus reinforcing the Zangger Committee activities and the IAEA safeguards system. This conference could be followed by a larger one, expanded to include other nuclear industrial states, notably the Netherlands, Sweden, South Africa, Italy, Belgium, Switzerland, Spain, Australia and possibly India.*

*Criteria for participation in the restricted conference seem relatively clear, since the seven nations designated are the most significant potential nuclear suppliers. Selection in the case of a broader conference will be more arbitrary. In the case of a larger conference, it should be recognized that the Soviets may insist on greater representation of their allies, thus creating pressure to further expand its size. We could inform the PRC in advance of a conference and welcome their attendance; they would be unlikely to accept an invitation.

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In introducing the proposal for the conference, we have approached all participants, giving special attention to the French and Soviet concerns. If the French indicate clear opposition, it will be necessary to reformulate or abandon the conference approach. In any event, less formal efforts to strengthen multi-lateral safeguards efforts should continue to be pursued, whatever the outcome of the conference plans.

Any meeting of nuclear industrial states not only runs the risk of alienating non-participants, who may see themselves as potential exporters, but can also lead to serious concerns on the part of important nations that a "suppliers' cartel" was being constructed. This latter concern could be minimized by stressing the positive aspects of the conference -- the prospect that economical enrichment or reprocessing services will be offered and the possibility of multinational plants to serve regional needs. More generally, users of commercial

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nuclear fuel and facilities must recognize the fact that the continued availability of these materials from the major supplier states will increasingly depend upon obtaining assurance through safeguards that nuclear exports will not contribute to the proliferation of independent explosive devices.

E. Nuclear Delivery Systems

Nations contemplating acquiring nuclear weapons will probably consider the question of acquiring a delivery system or systems. To be sure, countries could explode a device for prestige purposes or simply as a vague technique for threatening an enemy -- a strategy which India may well be pursuing at this stage. Moreover, such countries would immediately have some limited delivery options open to them although such options would be primitive. More specifically, nuclear weapons could be delivered by infiltrating fishing, pleasure, or commercial vessels or even trucks or autos, or by ships using short range missiles (e.g., OSA or KOMAR boats in the case of India and several other countries) or by land mobile surface-to-surface missile systems. Most countries also have some military or commercial aircraft which could be employed.

The five major nuclear powers, however, all moved into relatively substantial nuclear force programs for political

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as well as strictly military reasons. If India has not already decided to eventually build a nuclear weapons force she might discover that the hidden benefits of her recent nuclear test, in terms of bringing political power and improved security, cannot be realized without eventually following the military line.

If a potential nuclear weapons state includes the need for an effective force as an element affecting its decision to "go nuclear", the balance could be shifted against those advocating such a course, since the technical requirements, costs, and timing of crossing the nuclear threshold could be seen as posing difficult hurdles. Such a need is much more likely to be perceived in the case of an advanced country than a relatively backward one. Many of the industrialized NNWS could manufacture nuclear weapons in a relatively short period after a decision to do so, but would probably demand a relatively sophisticated delivery system that would take some time to construct. Hence, for countries such as Japan, Italy, and the FRG, attempts to control equipment related to delivery systems could be more relevant than controls on nuclear material and equipment.

Obviously, the delivery vehicle needs of a potential NWS can vary widely as a function of its objectives in "going nuclear", the security threats it faces, and whether it wishes

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to become a regional or global power. The British, the French, and the Chinese forces can be considered as representing fairly sophisticated capabilities with worldwide as well as regional impact. India could be content with a minimal aircraft delivery capacity vis-a-vis Pakistan, but would have to mount a major program to match or even approach the PRC's ballistic missile efforts.

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The delivery needs of Brazil or South Africa would be less stringent than those of Israel or Egypt and could be met by modified commercial jetliners. On the other side of the scale, it is unlikely that Japan would undertake a nuclear decision without construction of a sophisticated missile capability.

Given the fact that many nations already own modern aircraft capable of nuclear delivery and have peaceful space rocket programs, and that some countries would be satisfied with extremely small-scale forces and perhaps relatively primitive means of delivery, economic and technical hurdles may not likely play a dominant role in deterring proliferation decisions during the coming decade.

In the case of a country desiring a modern sophisticated strike force, nuclear weapons costs as such could be modest

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compared to delivery expenses. The ease with which a nation could acquire delivery systems and the cost of such systems, however, would be highly variable. Although nuclear-capable aircraft, such as the Canberra bomber, might be purchased for approximately \$10 million per unit, the development and production of relatively sophisticated force of 50 aircraft or ballistic missiles, could require from 8-10 years and involve a total cost of around \$3 billion. Hence, selective attempts to limit the acquisition by potential NWS of delivery systems and related technologies could contribute to a US non-proliferation strategy. These could be aided by the fact that there are relatively few potential suppliers of long-range bombers (US and USSR) or advanced ballistic missiles (France and the two superpowers).

Establishing meaningful criteria and effective controls in the delivery system area is no easy technical task, since most aircraft are dual-purpose and the line between "peaceful" space-related rockets and military missiles is not easy to draw. Alliance and other political commitments must not be compromised in the process, moreover, and the existence of alternative suppliers can undercut unilateral US actions. We sought unsuccessfully to slow the French attempts to acquire a nuclear delivery system in the early 1960s through

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tight export control policies. On the other hand, in the early 1970s we adopted guidelines for assisting Japan's space rocket program which recognized the disadvantages of providing aid in certain areas, such as inertial guidance systems, which had military applications and were not essential for peaceful projects.

In addition to exploring the possibility of adopting parallel policies in other bilateral agreements, we should consider initiating informal efforts among major suppliers to develop agreed selective export criteria for certain classes of delivery vehicles and critical components or technologies.*

As a minimum, whenever appropriate, the US should stress, the complexity of maintaining a reliable deterrent system, as well as the impossibility of doing so over time without a massive commitment to resources to insuring the credibility and invulnerability of second strike forces.

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III. STRENGTHENING LEGAL-POLITICAL CONSTRAINTS

A successful non-proliferation strategy will be affected by perceptions of non-nuclear weapon states regarding progress in US-Soviet nuclear arms limitations as well as the confidence of these states that their security and political needs can continue to be met without recourse to independent nuclear forces. Decisions to acquire nuclear weapons will ultimately rest on an assessment of self-interest taking into account security, political and economic factors. In this sense, our alliance or other overall relationship with the country involved, our national and mutual defense arrangements, security assurances, arms control measures, and progress in avoiding or settling international hostilities and promoting greater stability, all play some role in creating an environment within which independent nuclear arms programs can be seen by NNWS as either unnecessary or undesirable.

Over the longer term, the US should do its part, consistent with our security interests, in seeking to diminish the perceived political and military value of acquiring nuclear weapons, to further curb nuclear testing and vertical proliferation, and to achieve reliable mutual reductions in nuclear arsenals. One of the most concrete and essential ingredients of a non-proliferation program, however, is to obtain a commitment by a NNWS not to use nuclear materials for weapons purposes. Such a commitment is

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in the nuclear field and other international accords, such as IAEA agreements and the Latin American Nuclear Free Zone (LANFZ). But the most widely adopted general commitment of this type is the Non-Proliferation Treaty (NPT).

Over the long term, attempts to deal with the proliferation problem through physical controls or safeguards on nuclear-related capabilities alone may well not suffice. A complementary approach must be pursued by decreasing the motivations of other nations to translate whatever technical capabilities may be available into a decision to develop nuclear explosives. This approach is perhaps more difficult and elusive than attempts to contain capabilities, since the factors affecting nuclear explosives decisions vary from country to country and are extremely complex. Nevertheless, strategies for the US to follow are available and can be grouped into five general categories:

- (a) increasing legal obstacles;
- (b) meeting security concerns;
- (c) reducing discriminatory aspects of non-proliferation;
- (d) dealing with prestige considerations; and
- (e) establishing prospective sanctions.

A. Increasing Legal Obstacles

1. Gaining broader adherence to the Non-Proliferation Treaty (NPT)

The NPT, which was sponsored and promoted primarily by the United States, and which now has 84 parties and 23 other

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signatories, is the principal international instrument for the implementation of our non-proliferation policy. It provides an opportunity for states, either separately or simultaneously with rival states, to convert a decision to forswear indigenous nuclear explosives into an international legal obligation, specifically approved by their parliaments and judged to serve their national interest. NPT ratification not only adds to the international political obstacles to going nuclear, but also makes it more difficult for domestic proponents of a nuclear explosive program in potential NWS to force reconsideration of the decision. Moreover, the NPT requires international safeguards on all the peaceful nuclear activities of each NNWS party. Entirely apart from the question of technical effectiveness, once external safeguards are instituted, the use of nuclear materials or facilities for military weapons purposes would involve the political and legal costs of abrogating an agreement or risking discovery of a clandestine program and could risk economic retaliation at least including a cut-off of further nuclear energy assistance.

We are clearly at a crossroads where the future efficacy of the NPT may be determined and our commitment to non-proliferation put to the test. Even prior to the Indian explosion, ratification of the Treaty by certain key signatories before the NPT Review Conference in May, 1975 was judged vital to

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the Treaty's success. While these states appeared to be progressing toward that end, in some cases (especially Japan and Italy) the outcome was not fully assured. The Indian explosion has provided an additional argument to the opposition in these countries to NPT controls, and has increased the prospects of a "chain reaction." Without these ratifications, other potential parties would be less likely to join, even parties to the Treaty and strong supporters such as Canada might lose interest, and the common interest which we have with the Soviets in this field could be damaged.

Even more important than the participation of a particular NNWS in the NPT is continued dedication of the Soviets to the object of non-proliferation and to the integrity of the NPT. US-Soviet cooperation in this area is a prerequisite to a viable US non-proliferation policy and the survivability of the NPT, and has become all the more essential in view of our having arrived at crossroads with respect to proliferation.

During recent years, US support for the NPT has been perceived as declining, and our response thus far to the Indian explosion has been muted. Our public posture and actions during the next few months can have an important effect on the credibility and effectiveness of our non-proliferation policy. While the treaty is only one of our non-proliferation devices, any further major blow that it may

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suffer would make it much harder for us to continue to deal with non-proliferation through other devices. A policy of relative indifference to the NPT at this juncture can seriously damage our ability to cope with non-proliferation, while reinvigorated efforts on the Treaty's behalf could help prevent such serious damage and compensate for the setback represented by the Indian explosion.

The efficacy of the treaty depends not only on how well it is implemented but also on how widely it is adhered to by (1) states with the potential of acquiring nuclear explosives, and (2) potential suppliers of relevant materials, equipment or technology.

The 84 present parties to the treaty include, among others:

(1) all Warsaw Pact members except Albania, one noteworthy accomplishment of the treaty being the placing of IAEA safeguards on all the peaceful nuclear activities of Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland and Romania;

(2) all NATO members except the six signatories described below and Portugal, which has not signed it;

(3) Sweden and Australia;

(4) the Republic of China;

(5) six Arab states (Jordan, Lebanon, Morocco, Syria, Iraq, and Tunisia); and

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(6) Mexico, Yugoslavia and Iran.

The 23 states that have signed but not yet ratified the treaty include the following key states, which might well ratify within the next year (although the failure of Italy or Japan to do so could lead the others to withhold ratification):

(1) the following NATO members: FRG (whose parliamentary procedures have been completed), the Benelux countries, Italy (whose ratification in this time frame is the most doubtful), and Turkey;

(2) Switzerland;

(3) Japan; and

(4) Egypt (which will presumably not ratify unless Israel joins the treaty).

The most significant non-signatories, other than France and the PRC, are:

India and Pakistan;

Israel and South Africa;

Spain and Portugal;

Argentina, Brazil and Chile.

(South Africa has been rigorous in requiring IAEA safeguards on its nuclear exports to NNWS.)

The French situation is described in Section V, and the PRC has not yet become a supplier of nuclear materials

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or equipment. Neither seems likely to transfer nuclear

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although France has transferred nuclear equipment and material under less stringent conditions than we would consider appropriate.

The principal potential strategic nuclear powers are thus at least signatories to the treaty and, together with certain parties to the treaty, they include most of the world's suppliers of nuclear materials, services and equipment other than France. The coming year may well be decisive in whether or not these signatories ratify the treaty. Since their adherence is of key importance to the efficacy of the treaty their ratification is highly desirable. This would require a high level approach in the near future to Italy and Japan, in particular, indicating the importance we attach to their adherence and the extent to which it will facilitate our future cooperation with them in the peaceful uses of atomic energy, with vigorous follow-up.

Continued Italian delay in ratification of the NPT has far-reaching implications for our entire non-proliferation policy. Italy is a member of EURATOM together with the FRG, the Netherlands, Belgium, Ireland, Luxembourg and Denmark) and severe legal and practical problems will ensue if some members of EURATOM ratify the Treaty and verification agreement and others do not. The persistent Italian foot-dragging in moving ahead with its ratification procedures jeopardizes the continued supply of nuclear material by the US to all of the Euratom states and may expose the US to criticism by NPT parties of these supply arrangements conducted in the absence of a EURATOM safeguards

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In view of the possibility that Italian ratification cannot be obtained within the coming year, we should discuss with the Germans, Dutch and Belgians the possibility of their proceeding without Italy, and of showing less inclination to assist Italy in its nuclear program, although problems connected with Italy's membership in EURATOM would have to be overcome.

Of the non-signatories, Spain and South Africa, neither of which has categorically rejected participation, seem important targets for intensified efforts to enlarge membership in the treaty, because of their potential capabilities and (in the case of South Africa) temptation to go nuclear. Portugal may also prove receptive to adhering to the NPT, perhaps in connection with Spain's adherence.

The other non-signatories listed above are, in the absence of a comprehensive Middle East settlement (in the case of Israel) or a radical change of regimes, unlikely to join the treaty. But since they are, in varying degrees, potential regional nuclear powers, recourse is necessary to the other means described in the study of curbing their capability, and reducing their incentives, to become such powers.

Since the Indian test, the question of Indian NPT membership under a special category has arisen. The prospect of finding a formal place for India is acceptable to the

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Indian Government -- is not a promising route and could be counter-productive for non-proliferation. It is not promising since joining the treaty as a NNWS would require India to forswear indigenous PNEs. India could not join as a NWS, since the treaty limits that class to states which had manufactured and exploded a nuclear device before 1967, and amendment of the treaty would require resubmission to some 80 parliaments, including those (such as the FRG) which have just approved it. However, less formal and potentially more productive means of establishing a "constructive niche" for India might be available. (See Section V.)

The most important policy actions that the US should take during the next six months to help buttress the NPT are the following:

(1) Reaffirm high-level US support for the NPT and the urgent need for widest possible adherence. This should be done publicly and privately in order to remove any doubts as to the priority we attach to the Treaty and to set the stage for the NPT Review Conference in May 1975.

(2) Approach crucial NPT holdouts at high levels with a view to securing early ratification decisions. We have recommended that President Ford reaffirm to the Japanese on the occasion of his visit to Japan our intense interest in advance of the May 1975 Review Conference -- indications of increasing opposition to ratification make this more imperative.

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In addition we should consider

(a) discussing with the West Germans, Dutch and Belgians the feasibility of their becoming parties to the Treaty this year, irrespective of Italian ratification;

(b) approaching the new Italian Government on GOI adherence; and

(c) approaching the following countries on NPT ratification: Spain (the non-signatory NNWS with the largest commercial nuclear power program), South Africa (in view of its natural uranium resources and construction of an enrichment plant), and Switzerland (a significant commercial nuclear power whose ratification would be important and appears attainable).

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(3) Identify and act upon visible ways to give preferential treatment to NPT parties in such areas as the availability of commercial nuclear facilities, fuels, technological support and, possibly, credit terms. Article IV of the NPT, which covers cooperation in peaceful uses other than PNE services, created an expectation of special treatment of NPT parties.* Thus far, the US has taken only small steps clearly favoring NPT parties: consideration of NPT status in specialized export requests for such materials as highly enriched uranium (pursuant to NSDM 235); preferential consideration of NPT parties for grants of special nuclear material under the AEC's offer of material to the IAEA for research or medical therapy; and, beginning in 1975, preferential AEC consideration of NPT parties for technical assistance programs.** In addition, published AEC regulations (Part 110 Code of Federal Regulations) make NPT adherence one of the factors considered in licensing unclassified technical assistance in the construction or operation of foreign enrichment, reprocessing, fuel fabrication or heavy-water facilities. The response to NSSM 209 will

*See Statement by AEC Chairman Ray before the 18th General Conference of the IAEA, September 17, 1974.

**The issue of how to approach Article V, which gives NPT parties special rights to PNE services, is considered in Section IV.

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also consider preferential treatment with respect to US uranium enrichment services. Beyond these steps, little if anything has been done by the US -- or the USSR and other suppliers who are NPT parties -- to give credibility to Article IV.

In formulating non-proliferation policy at this juncture, to the extent that increased special consideration can be given to NPT parties, and this fact made known, the attractiveness of joining the NPT can be enhanced. In to deciding upon a comprehensive US approach to this question, efforts should be made to persuade the Soviets and other suppliers who support the NPT to take parallel action. Preference for NPT parties in providing technical assistance through the IAEA will also be a source of particular interest to the developing countries. These nations can be expected to insist on greater support for this sort of assistance as the price for IAEA safeguards role (which seems of less direct benefit to them).

In an attempt to upgrade preferential treatment, possible steps worth consideration would be (a) contributing to a bank of low-enriched uranium for the benefit of develop-

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ing countries who are NPT parties; (b) declaring that we do not intend to enter into further Agreements for Cooperation (beyond those which we are already committed to negotiate) with non-parties to the NPT in the coming year; (c) announcing publicly that NPT status will be an important factor in US decisions on the export of HEU, and (d) considering NPT status in providing financing terms for commercial nuclear exports.

There is a danger, however, that preferential treatment for parties could conflict with our attempts to enter into productive and safeguarded associations with nations who choose to remain outside the treaty, as, for example, our efforts to lessen the risk of diversion by Egypt and Israel through cooperation with special conditions. Some way must be found to secure the advantages of both approaches -- perhaps through favoring NPT parties with respect to materials availability, and cost, while still agreeing to cooperate with non-NPT parties but under more stringent terms.

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(4) Complete negotiations with IAEA before the end of 1974 on a safeguard agreement pursuant to the 1967 Presidential offer (reaffirmed in 1969), permitting IAEA safeguards in selected US commercial nuclear facilities. Not only would this diminish general concerns over discrimination, but it would help persuade NNWS that we are not seeking competitive advantage over them in the international market. Completion of US negotiations with the IAEA would be especially useful in demonstrating good faith and helping induce Japan, West Germany, Italy, and possibly others to become parties to the treaty on a timely basis.

2. The Role of the 1975 NPT Review Conference

In addition to direct efforts to achieve wider adherence to the NPT, it is necessary to satisfy the present parties to the treaty, and those considering adhering to it, that it is worth joining, and that it is being adequately implemented. These issues will be the focus of the conference of the parties, called for in the treaty, to be held in May, 1975 "to review the operation of (the) Treaty, with a view

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to assuring that the purposes of the Preamble and the provisions of the Treaty are being realized."

The basic issues at that NPT Review Conference are likely to be the following, with the greatest stress in Items (4) and (6):

(1) how well the Treaty is achieving its objective of preventing proliferation;

(2) whether the safeguards provisions are being properly implemented, and whether the costs are fairly allocated;

(3) whether the voluntary offers by the US and the UK to permit the IAEA to safeguard their peaceful nuclear activities -- in order to demonstrate that they were not seeking any commercial advantage from requiring safeguards in the industrialized non-nuclear weapon states -- are being properly implemented and their costs fairly allocated;

(4) whether the prospects for increased international cooperation in the peaceful uses of nuclear energy, and for technical assistance in this field to developing countries, held out in Article IV of the Treaty have been adequately realized, and whether parties to the treaty, especially LDCs, have benefitted more in these respects than non-parties;

(5) whether the offer in Article V to make the potential

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benefits of peaceful applications of nuclear explosions available to non-nuclear weapon states parties to the treaty, who gave up the right to develop their own nuclear explosives for this purpose, has been adequately implemented;

(6) whether the pledge in Article VI to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and the objective of achieving a comprehensive ban on nuclear weapons tests referred to in the Treaty's preamble, have been adequately pursued; and

(7) whether the security assurances contained in UN Security Council Resolution 255 and related US, Soviet and UK declarations at the time the treaty was signed, are adequate, or should be supplemented.

A positive outcome of this review conference will depend in large measure upon (a) our success in achieving wider adherence to the treaty in the coming year, and (b) the actual progress we can show in the areas of concern listed above. A number of these are addressed in other sections of this study.

actual progress we can show in the coming year in the areas of concern listed above. A number of these are addressed in other sections of this study.

3. Restrictions on Nuclear Testing

With few exceptions (notably Pakistan, Argentina,

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Columbia, Portugal and South Vietnam, which have signed it, and Saudi Arabia, which has not) all nations with a foreseeable capability to go nuclear are already parties to the LTBT and would therefore (like India) probably confine any explosions to underground ones rather than abrogate their treaty commitments. Israel, for example, is a party to the LTBT but, unlike India or many other nations, would have great difficulty in testing underground given that nation's small geographic area -- unless the Sinai Peninsula were utilized. In Israel's case, however, it might well be possible to construct a reliable bomb without any form of testing. As a general rule, nations desirous of obtaining political as well as military benefits of a nuclear decision would probably wish to demonstrate their capabilities in some manner and would, therefore, seek the opportunity to detonate a device. Assuming they had the technical capability, Egypt, Brazil, Spain, South Africa, Libya, and a number of other important NNWS that are parties to the LTBT, could join the nuclear club without testing above ground. In this sense, the existing test ban treaty may have only marginal direct effect in imposing inhibitions on further nuclear weapons decisions, but in the case of states not parties to the NPT or the Latin American Nuclear Free Zone treaty (e.g., Argentina and Brazil) it is the only existing legal inhibition.

The key question in terms of test ban constraints is whether the prospect for a more restrictive ban on nuclear weapons is consistent with our national security interests. A

comprehensive test ban or a low threshold test ban could severely limit the development and demonstration of nuclear weapons by new states if (i) it did not have an exception which allowed such states to conduct their own PNEs, and (ii) it was joined by the state in question. (Even if the state did not join it, such a treaty could increase the political inhibitions on activities of the type it covered, as well as reduce the political incentive to pursue such activities, since it would be a sign that the NWS were beginning to curb the nuclear arms race.) However, the key non-parties to the NPT who have indicated an interest in indigenous PNE programs (India, Argentinian and Brazil) would seem unlikely to join a test ban treaty that forbade indigenous PNEs (at least so long as the NWS retained a PNE option), while one that permitted them would promote proliferation and discriminate against parties to the NPT.

It should be noted that Mme. Ghandi has indicated that India would be prepared to stop nuclear explosions if all nuclear weapons states did so. To meet this condition literally, a comprehensive test ban, accompanied by the cessation of French and PRC tests, would appear to be required.

A threshold test ban that permitted the NWS to continue PNE progress under the threshold would do little to deter NPT holdouts from following the Indian example.

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4. Nuclear Free Zones

The only regional non-proliferation treaty is the Treaty for the Prohibition of Nuclear Weapons in Latin America, which entered into force in 1967. All Latin American countries except Cuba and (because of a dispute over its eligibility) Guyana are signatories to the treaty, and all others but Argentina, Brazil, Chile, and Trinidad and Tobago are fully bound by it. (Brazil and Trinidad and Tobago have actually ratified it, but not waived certain conditions for its entry into force in their territory. (We have no evidence that Argentina is considering ratification of the NPT.)

This Treaty goes further than the NPT in that it not only contains an undertaking not to manufacture or acquire nuclear weapons, and to prohibit any other military use of nuclear energy, but also to prohibit and prevent the possession, storage or deployment of nuclear weapons by other countries in the Latin American region covered by the Treaty. It further requires IAEA safeguards on all nuclear activities in this region, and gives supplementary verification rights (including on-site inspections) to the regional organization created by the Treaty. While the Treaty is less clear than the NPT on the status of peaceful nuclear explosives, most

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present parties to the Treaty appear to consider that it prevents the indigenous development of such devices.

Argentina and Brazil, which have not yet brought the Treaty into force in their territories, take the contrary view.

The Treaty contains two Protocols. The United States, the United Kingdom, France and the PRC are all parties to Protocol II, in which nuclear weapon states undertake to respect the nuclear free zone in the states where the treaty is in force, not to contribute to its violation, and not to use or threaten to use nuclear weapons against parties to it. We understand the Soviet Union may be considering signature of this Protocol and that the Latin Americans may now urge the Indians to join it.

In depositing the US instrument of ratification of Protocol II, which was unanimously consented to by the US Senate, President Nixon also deposited a declaration clarifying certain points. One was our understanding that the treaty did not affect the transit rights of our naval vessels; another was that we understood the treaty to prohibit indigenous development of PNEs, and in this connection we offered to extend the undertaking under Article V of the NPT to any party to the Latin American treaty that followed this interpretation; and another was that we would have to consider an armed attack by a party to the treaty in which it was assisted by a nuclear

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weapon state to be incompatible with its obligations under the treaty, thus relieving us of our corresponding obligation not to use or threaten to use nuclear weapons against such party.

The Treaty also had another Protocol, designed to enable countries outside Latin America which had territories in that region to put such territories under the regime of the Treaty. The United Kingdom and the Netherlands have ratified this Protocol. France and the United States have not, although we have officially stated that we would be willing to have the Canal Zone included, and would be willing to include Guantanamo if Cuba joined the Treaty.

The possibility of creating analogous nuclear free zones in other regions has often been raised. An effort to do so in Africa in the late 1960s was initiated, but not pursued. The possibility of an African nuclear free zone (resurrected by Nigeria at the CCD) or of a Middle East NFZ (sponsored by Iran and Egypt at the UNGA), might well be considered again in the interests of furthering our non-proliferation efforts. As a specific response to the Indian test, the Pakistanis have also proposed the creation of a South East Asian nuclear free zone.

B. Meeting Security Concerns

The principal motivation for acquiring nuclear weapons is undoubtedly the perception that they are necessary or

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desirable for the national security of the state concerned. This will obviously depend on the state's perception of the threats which it faces, the adequacy with which such threats could be met without nuclear weapons, the perceived utility of nuclear weapons, and the disadvantages and costs of obtaining a relevant nuclear weapons capability (which in some cases, might have to include an extensive delivery capability).

Where a state does not consider itself threatened by others, or considers its existing security framework adequate to the task (as in the case of Canada), this motivation will not be strong. It can also be greatly reduced if all relevant states join in a commitment (such as the NPT or a regional nuclear free zone) not to go nuclear.

Where regional hostilities exist -- as between India and Pakistan, or Israel and the Arab countries -- a national security motivation is particularly likely, and if one of them developed a nuclear weapons capability, the other would have to consider following suit.* But, at least before this occurs, the likelihood of this reaction would have to be taken into account by each state, and the security of both could be enhanced by a mutual undertaking not to take the nuclear step. Efforts to improve their relations (as in the

*For discussion of minimizing the risk of Pakistan's doing so, see Section V of this study.

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case of the Mid-east negotiations and the Simla agreements) can be of considerable significance in reducing the motivation for going nuclear. As between friendly countries, nuclear weapons pose no threat other than that implicit in the fact that in the long range friendships can deteriorate.

Alliances and bilateral and multilateral security arrangements can also help make a nuclear weapons decision seem unnecessary. Whether less specific forms of security assurances -- such as UN Security Council Resolution 255 and the related declarations of the US, UK and USSR given in connection with the signing of the NPT, or variants thereof -- can make a significant difference is more questionable. A preliminary review of both these approaches to meeting security concerns is set forth later in this section. The question of security assurances is expected to be raised by the parties to the NPT at the Review Conference to be held in May, 1975, and further consideration must be given to how to handle it there.

Other approaches to this problem include the provision of military assistance (such as the financing of air defense for Pakistan) and possible variants on the Agreement on the Prevention of Nuclear War, to establish mechanisms for urgent consultations to head off such a war.

Since one component in a nuclear decision is the perceived utility of nuclear weapons, greater stress on their

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limited military utility and a de-emphasis on the importance of such weapons in our defense posture would appear helpful (but if this reduced confidence in our "nuclear umbrella" it could cut the other way.) From this point of view, continued US efforts to strengthen the conventional capabilities of its friends and allies, rather than the substitution of tactical or other nuclear weapons therefor, would appear to be indicated. In this connection, the Swedes have been particularly sensitive to what they see as a trend toward the introduction of small tactical nuclear weapons in Europe, and have indicated that this development could lead them to reconsider their renunciation of nuclear weapons, especially if it became evident that the nations introducing such systems no longer perceived a fire-break between nuclear and conventional systems.

1. US Security Commitments and Assurances

Our security commitments to non-nuclear states are contained in:

- Collective Defense Treaties (e.g., NATO, Rio Pact) and
- Bilateral Defense Treaties (e.g., mutual defense treaties with ROK, Philippines, ROC).

In addition, assurances stopping short of legal commitments are contained in:

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-- Executive Agreements on Cooperation relating to Defense (e.g., Turkey, Iran, Pakistan);

-- joint statements (e.g., 1962 Rusk-Thanat statement reaffirming the SEATO Treaty as a basis for the US commitment to Thailand); and

-- unilateral statements by authorized US spokesman (e.g., President Nixon's affirmation of our support for Pakistan's independence and integrity).

Finally, US interest in the security of some 15 countries not covered by the commentaries described herein is manifested by military assistance in the form of training or material.

When those commitments and assurances were entered into, inhibiting the proliferation of nuclear weapons was not a primary objective, if it figured at all. However, in many instances US security guarantees have come to be an important factor in whatever considerations countries concerned may have given to developing a nuclear weapons capability. Obviously some of our commitments have more effect than others in this regard. NATO countries (less France) have been happy thus far to rely on the US nuclear umbrella for their protection. Thus, the FRG, with the highest potential of any non-nuclear state for quickly attaining a nuclear capability, has demonstrated a willingness to forego this course of

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action. But other commitments which we have undertaken would not necessarily have the same inhibiting force. In Latin America, for instance, where prestige rather than a major threat to security would probably be the principal motivation, the existence of the Rio Pact would appear to have very little impact on a decision by, say, Argentina or Brazil to develop a weapons capability.

The types of US security commitments most pertinent to the question of non-proliferation are the bilateral defense treaties. In the case of the Republic of Korea, the mutual defense treaty and the presence of US forces had been sufficient to reassure the ROK that their security needs were being met without having to consider nuclear weapons development programs, but recent intelligence indicates that the ROKG desires to acquire a nuclear weapons capability by 1980. And in the case of the Republic of China, if the US-ROC defense treaty had provided sufficient assurance to deter Taiwan from developing a nuclear capability, their attitudes also began to change with the July 7, 1971 announcement that the President planned to visit Peking. Since that time Taiwan has increasingly come to believe that it cannot rely on the US commitment indefinitely and that it may have to rely on its own resources, including nuclear weapons if necessary, to provide for its own defense. The pace of the

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drive toward self-sufficiency, including a firm decision to proceed with a nuclear weapons program, will depend in part on the ROC's assessment over time of the extent to which the US commitment has been eroded.

It is with Pakistan that the value of bilateral assurances in the non-proliferation context is being put to the test. The Pakistan case vividly illustrates the limitations and problems in this regard. In the light of the Indian explosion Pakistan has come to regard both general assurances such as that embodied in the 1968 trilateral assurances and the bilateral assurances in the existing executive agreement with the US as inadequate. Our support for Pakistan's independence and integrity has been voiced categorically by President Nixon. But the Pakistanis would like evidence of more solid support. They have asked for liberalization of the US arms supply policy and assurances against the nuclear threat from India. Any formal bilateral assurance to Pakistan could meet with grave Congressional opposition and would have implications for other bilateral relationships should other non-nuclear countries follow India's example.

Looking beyond the Indian explosion to the possibility of additional membership in the nuclear club in the near term, it is apparent that in most instances (e.g., Israel,

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Egypt, Iran, Argentina) the immediate impact would be of a regional nature. Should one of these countries emulate India, the US would be inhibited from responding to the concerns of neighboring countries by the same factors that limit our ability to respond to Pakistan's requests -- Congressional opposition to formal assurances, the importance of maintaining tolerably good relations with the testing power and the likelihood that if asked by a threatened state, we would be unable to make any significant response with military forces or equipment.

Despite these limitations, US commitments have now and will continue to have an important role in our non-proliferation effort. As noted earlier, they have undoubtedly helped deter several nuclear-capable nations from engaging in weapons programs, and as long as our commitments continue to be credible, they will maintain this inhibiting effect.

2. The Role of US Military Deployments

Another aspect of US commitments in the security field which deserves mention is the role of our military presence. The assurance which NATO provides to European countries is greatly reinforced by the presence of our forces on the continent. Likewise, American troops in South Korea enhance the credibility of our commitment under the US-ROK Mutual Defense Treaty. In other areas too -- the Eastern Mediterranean,

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the Indian Ocean -- the US military presence has helped give weight to our assurances.

US naval forces in the Indian Ocean invite special attention in the wake of the Indian explosion. NSSM 199 addresses the issue of U. S. forces in the Indian Ocean, along with options for arms control. To date, decisions on this study have not been taken. While there has been support from most of the littoral states for implementation of the UN General Assembly Resolution calling for an Indian Ocean Zone of Peace, the attitudes of some of these states could change as a result of India's action. Pakistan in particular, as well as others, would welcome the retention of a significant US presence in the area as an assurance against more assertive Indian policies, especially if the USSR continues its Indian Ocean deployments. Thus, arms limitation objectives may conflict to some extent with security assurances for certain NNWS in the area.

Summary

The following conclusions and observations are suggested by the above discussion:

(1) Existing security commitments in certain areas contribute importantly to non-proliferation objectives. Even assurances short of binding commitments in which the US is pledged to come to the defense of the member states can be

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helpful. However, such commitments and assurances cannot have a decisive deterrent effect. An assurance which is backed by a US military presence in the area (NATO, Korea) is more effective than declarations, treaties or executive agreements alone.

(2) A careful weighing of the assurance factor as it relates to non-proliferation will be called for when contemplating reductions in US military deployment abroad for budgetary, political, or arms limitation reasons.

(3) The non-proliferation aspect can be an argument for retaining Mutual Security treaties with countries which have a potential nuclear capability.

(4) However, some existing security commitments are not particularly effective in providing the sorts of assurances that NNWSs require when they feel threatened from a new quarter (Pakistan), and others would have no effect on states that wished to acquire nuclear status largely for means of prestige (Latin Americans).

(5) Although it is possible to devise ways of strengthening many of our bilateral assurances, it is unlikely that any action in this regard which would add significantly to deterrence of nuclear proliferation could obtain Congressional assent.

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3. Other Security Assurances

Apart from specific commitments of the type discussed above, there are other relevant security assurances of two general types: (a) positive assurances, which hold out some prospect of support in the event a state is subjected to nuclear blackmail or is the victim of an act of aggression in which nuclear weapons, or the threat of their use, is involved; and (b) negative assurances, which relate to the non-use of nuclear weapons in stated circumstances.

The issue with respect to the first is their credibility and the fact that, to the extent they are credible, they can extend our military obligations. One important issue with respect to the second is how it relates to the threat perceived by the NNWS concerned (e.g., since the threat against Pakistan is India, non-use declarations by the US, the UK and even the USSR are not especially relevant to actual security needs, although they may have symbolic importance in de-emphasizing the role of nuclear weapons in general). Another issue with respect to non-use assurances is their impact upon the credibility of our nuclear umbrella (the weakening of which could increase the risk of proliferation) and the extent to which we need to preserve the option of using nuclear weapons to deter a massive conventional attack.

These are obviously controversial questions which the

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following discussion does not attempt to resolve. For example, it does not deal with the applicability of the positive assurances provided by the commitment in the Nixon Doctrine to "provide a shield if a nuclear power threatens the freedom of a nation allied with us or of a nation whose survival we consider vital to our security,"* in situations such as that created by the acquisition of a nuclear explosion capability by India.

a. Positive Assurances

The chief multilateral assurances involving the US aside from the general obligations of the UN Charter, are the security assurances provided in 1968 by the US, UK and USSR at the conclusion of the NPT negotiations. They consist of Security Council Resolution 255, developed and co-sponsored by the US, UK, and the USSR, and the virtually identical declarations by the three powers that were given at the time of the Council vote on the resolution. These trilateral assurances essentially amount to an expression of intent to seek appropriate action in the Security Council in the event that a non-nuclear weapon state party to the NPT becomes the victim of a nuclear threat or

*President's Foreign Policy Message, Building For Peace, February 25, 1971, page 13.

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attack. They leave to the discretion of the guarantors the question of whether an act or threat of aggression has actually occurred. The assurances also leave to their discretion the matter of what constitutes appropriate action by the Council. The three powers, who as permanent members of the Council retain the right to veto Council actions, are clearly not obligated to employ their own armed forces in the event of an alleged or actual nuclear threat or attack (though they are free to do so under Article 51 of the Charter). The US, therefore, is not committed to any responsibilities other than those already assumed under the UN Charter.

While many NNWS have been satisfied that the trilateral assurances represent the maximum that was possible under the circumstances, a number of others, particularly non-parties with pressing security concerns, have regarded the assurances as inadequate. They have argued that the assurances do not legally bind the three powers to respond in the event of a nuclear threat or attack, but only require that the Security Council be called to consider what action should be taken -- and any such action can be blocked by veto of one of the permanent members. [They have argued that the assurances do not legally bind the nuclear powers to come to the assistance of a victim of nuclear threat or attack, but only require that the Security Council be called to consider

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what action should be taken -- and any such action can be blocked by veto of one of the permanent members.] They have also complained that the assurances apply only to non-nuclear weapons states party to the NPT and that they do not contain pledges by the nuclear powers not to use nuclear weapons against non-nuclear weapon states.

While we have been unwilling since 1968 to expand upon the assurances provided in connection with the NPT, the Indian test can be expected to stimulate interest in reopening the question of assurances, even among NPT parties, and it is possible that we will be faced with pressures to revise and strengthen the 1968 assurances. However, few of the options for renewed consideration of the UN assurances seem very promising. Given the long-standing Chinese and French attitudes toward the NPT, we would not expect them to join in reformulating or reaffirming the 1968 assurances or in developing new multilateral guarantees. The Chinese, in particular, would almost certainly be opposed to a collective security undertaking with the Soviet Union. Moreover, the Chinese and French would not consider assurances that applied only to NPT parties, rather than to all NNWS, and we, the British, and the Soviets would presumably object to assurances to all NNWS on the grounds that incentives for joining the NPT would be weakened.

Because of the difficulties in involving the PRC and France in multilateral assurances, the option of discussing with the

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UK and USSR the possibility of revising the trilateral assurances could be considered. However, any modification of the 1968 assurances involving the revision of Security Council Resolution 255 itself would require Security Council action; this could involve the Chinese and French in contentious discussions and possibly result in further loss of credibility of the 1968 assurances.

A more feasible possibility -- and perhaps the only approach of this kind with a reasonable chance of working -- would be for the three nuclear powers to reinterpret their 1968 declarations or to issue new declarations, but to do so without bringing the matter to the Security Council (i.e., without revising SC Resolution 255 itself.) The purpose of marginally strengthening the 1968 declarations would be to provide greater incentives for joining the NPT. The three nuclear powers could, for example, revise their declarations so as to state their intention to seek effective action (to take immediate steps to seek effective measures, including immediate Security Council action), in accordance with the Charter, in support of any NNWs party to the NPT who is the victim of a nuclear threat or attack. The specific language would be designed to make explicit the possibility of assistance or action in case of a deadlock in the Council -- a possibility that is already provided for in Article 51 of the Charter -- without committing the guarantors to take any

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particular types of action, and certainly not to use their own armed forces.

It is quite possible that the Soviets would be unwilling to reopen the assurances question at all. In addition, reinterpreting the assurances for NPT parties would not, of course, meet the concerns of those likely to be the most vocal on the assurances issue, such as Pakistan and other non-parties. Another potential problem is that if key members of Congress were not consulted in advance of the upgrading of US assurances, and persuaded that these were in the national interest, the Congress might object that such assurances represented an Executive Branch attempt to expand US security commitments without Congressional approval, and contrary to the national interest. Publicly expressed Congressional doubts about such unilateral Executive Branch assurances would undermine their credibility in the eyes of those they were intended to reassure

The benefits of attempting to strengthen the 1968 assurances in this manner are difficult to calculate. Such a marginal upgrading of the guarantees -- indeed anything short of providing NNWS with the firm type of commitment we give our allies -- would not be expected, by itself, to allay significantly the security concerns of NNWS facing serious threats or to provide sufficient inducement for these states not parties to the NPT to join the treaty. However, even the modest strengthening

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of the trilateral assurances through revised declarations would provide some greater measure of reassurance, and, perhaps more importantly, would signal the willingness of the three nuclear powers to take additional steps in support of the NPT. Even if it seemed impossible to reach three-power agreement on revised declarations, a forthcoming US attitude toward the possibility of strengthening the assurances might contribute to our non-proliferation objectives.

b. Negative Assurances

"Negative" assurances -- though not helpful in the case of Pakistan unless India joined in giving them -- are another possibility. Unlike the UN assurances, non-use guarantees do not raise the problem of extending national commitments and therefore reduce the risk of Congressional opposition from that standpoint. In addition, both the Chinese and Soviets have proposed in the past their own version of non-use guarantees.

The chief problem for us with non-use assurances has been the belief that we need to retain the option to use nuclear weapons in response to a non-nuclear attack which cannot be contained conventionally. We proposed to the Soviets in 1968 a non-use formulation which was compatible with our existing doctrine for the defense of Europe -- namely, the prohibition of the use of nuclear weapons against any NNWS party to the NPT that is not engaged in aggression assisted by a

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nuclear power. A US non-use initiative along the lines of our 1968 proposal (but not necessarily limited to NPT parties) could have considerable appeal among NNWS. It is difficult to predict, however, whether the Soviets would be more receptive to it now than in 1968. The Chinese have on numerous occasions supported more far-reaching non-use measures (no-first-use, non-use against NNWS and against nuclear free zones) and it is unlikely that they would adhere to a more restrictive formulation.

A no-first use pledge would of course prohibit a nuclear response to a massive Soviet conventional attack in Europe. This paper does not attempt to judge whether these measures would now be in the net US national interest in light of the current East-West strategic balance but simply indicates that these alternatives might be more acceptable to the USSR and the PRC than the non-use formula previously put forward by the US.

France, India and the PRC would probably not support such assurances unless they were outside the context of the NPT and were extended to all NNWS (or, according to our 1968 formula, all NNWS not engaged in aggression assisted by a nuclear power), rather than only to NPT parties. It might

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be possible to limit the coverage to NNWS which have renounced the manufacture or acquisition of nuclear weapons (not necessarily through NPT adherence), as the Pakistanis have previously proposed, but this would depend on the attitudes of the Chinese, French and Indians.

While giving negative assurances to non-parties to the NPT would not, of course, increase incentives for joining the Treaty, NNWS parties to the NPT would not be expected to voice serious objections because they would be the beneficiaries of Chinese, French, and Indian pledges that would not have been made if assurances were confined to NPT parties. Moreover, by adhering to Protocol II of the Latin American Nuclear Free Zone Treaty, the US has already accepted a non-use undertaking to the countries for whom that treaty is in force, irrespective of the NPT-status of the beneficiaries of the pledge.

While an undertaking subscribed to by all six nuclear powers would obviously have the maximum favorable impact as a non-use assurance, non-use pledges by fewer than the six could also have a positive effect. In this connection, the Soviets might at least be willing to adhere to Protocol II to the Treaty for the Prohibition of Nuclear Weapons in Latin America.

Like assurances to seek action in support of victims of nuclear blackmail, non-use pledges cannot, by themselves,

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eliminate the security concerns of NNWS facing serious threats. However, perhaps more than the modest strengthening of the trilateral "positive" assurances, non-use pledges by the US and other nuclear powers could provide some measure of additional reassurance to NNWS and demonstrate the continuing commitment to the success of the NPT on the part of at least some of the nuclear powers making the pledges.

C. Reducing Discriminatory Aspects

1. Progress in arms control.

As reflected in Article VI of the NPT, non-nuclear nations will continue to press the nuclear nations to fulfill the obligations of pursuing more substantial limitations on their own forces as the "price" for adherence to the NPT on the part of those nations who have not signed or ratified. There has been a widespread sense of frustration that the SALT agreements, while an excellent first step, have not met either the commitment to limit "vertical proliferation" of nuclear arms or complaints from many non-nuclear states on the absence of progress in moving beyond the Limited Test Ban Treaty of 1963. Indeed, non-nuclear weapons states point to new superpower nuclear arms programs on the strategic level, such as MIRVs and the possible development of so-called "mini-nukes", as signs of lack of interest toward nuclear arms limitations by the superpowers. India has made a particularly major issue over the absence of arms control progress.

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A comprehensive test ban treaty, or possibly a very low threshold treaty, would be the measures most responsive to those concerns, and at least the former could also significantly reduce the risk of additional states following India's path. It is recognized, however, that US test ban decisions are likely to be made on the basis of many considerations, of which non-proliferation is only one.

Effects on non-proliferation should also be considered in US policy toward SALT II.

2. Peaceful Uses of Nuclear Energy

Under the NPT, the nuclear powers are committed to the promotion of nuclear developments for peaceful purposes to all NPT members, particularly LDCs. As discussed above, this commitment can provide inducements to nations to join the NPT. More generally, however, it represents one of the most important aspects of the concept of "balance of obligations" between the nuclear weapons states and the non-nuclear weapons states. Thus, even apart from its value in gaining NPT adherence, making peaceful nuclear assistance available under safeguards to NNWS offers a potentially effective tool in reducing discrimination concerns and strengthening non-proliferation barriers. One specific and significant balance of obligation problem is derived from the fact that NNWS parties to the NPT give up the option to develop their own PNEs, while NWS parties

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do not. (This is discussed in Section IV of this study.) Finally, the issue of balance of obligations is involved in the support by nations such as Germany, Japan and Italy for implementation of the US Presidential offer to permit the IAEA to apply its safeguards to US civil nuclear activities.

D. Dealing With Prestige Considerations

In addition to the foregoing security and other concerns, and to genuine interest in the potential benefits of PNEs, states may be motivated to develop nuclear explosives for prestige purposes, to enhance the seriousness with which they are taken in the international community, and because they find classification among the "have not" nations in this field to be intolerable.

There is no single prescription for dealing with these concerns, but de-emphasis on the military utility of nuclear weapons; avoidance of steps which appear to give special status to India as a result of its explosion; and pursuit of ways in which we can accord special international status and recognition to NNWS such as Japan would all be helpful.* The extent to which these approaches can in fact prevent a

*See Section V for country analysis.

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decision by other states to go nuclear cannot be measured. But in any event, such concerns will have to be dealt with in the 1975 NPT Review Conference.

E. Sanctions

One way of seeking to dissuade other states from following India's path (and conceivably dissuade India from further explosions) would be to make it clear that such a step would subject them to sanctions. While the credibility of such sanctions would be greater if we were prepared to apply them to the Indian event for demonstration purposes, the damage to our other relationships with India, the unlikelihood that such sanctions would deflect India from continuing on its path, and the doors they might close to cooperation with India in minimizing the future implications of its decision, were considered in NFSM 156 to make such "punishment" unattractive.

However, if one could establish prospectively -- by legislation or otherwise -- that any future explosion by a NNWS would result in a cut-off of nuclear cooperation or a commensurate reduction in foreign aid or security support -- it would be possible to create a credible disincentive to doing so. For example, if several aid-giving states made it clear that each would deduct from its foreign assistance an amount measured by the expenditures of a NNWS on develop-

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ment of nuclear explosives, this would increase the cost of the program several fold, and make increased expenditures on it still more unattractive. While for a state determined to develop this capability, financial disincentives might not be decisive, they could have an effect on some countries who were wavering over the decision whether to go this route, especially if they were planning to justify it on PNE economic grounds.

Another approach is the legislation introduced by Senator Cook and Congressman Parris to withhold all aid to India until India signs the NPT. It is assumed that what is meant is for India to accede to the NPT as a non-nuclear weapon state, and thus forswear all future development of her nuclear explosive capability. (It would be both impossible and undesirable for India to join the NPT as a nuclear weapon state.) While such a bill would undoubtedly make clear our interest in NPT adherence by India and others who might be tempted to follow its path, it would clearly not accomplish the objective of gaining Indian adherence to the treaty, and might prejudice efforts to obtain some functional equivalent of NPT adherence, as discussed in Section V.

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IV. PNEs AND NON-PROLIFERATION

A. The Problem

The Indian nuclear test focussed attention on the proliferation implications of PNEs. The major points concerning PNEs as they relate to proliferation can be summarized as follows:

-- Notwithstanding Indian claims to the contrary, a nuclear explosive device, regardless of its intended purpose, could be used as a nuclear weapon, and for a country in an early stage of nuclear explosives development the technology for making such devices for peaceful purposes is indistinguishable from the technology for making nuclear weapons. These points are embodied in the NPT, for NWS are committed to not [in anyway] to assist, encourage, or induce in anyway non-nuclear weapons states to manufacture any nuclear explosive device while NNWS which joined the treaty gave up their option to acquire nuclear explosives. There are a number of NNWS not parties to the NPT, however, which may be tempted to demonstrate a nuclear weapons capability under a PNE cover for prestige purposes, as the Indians appear to have done.

-- The NNWS that joined the NPT were assured in Article V that potential benefits of applications of such explosives would be made available to them by the NWS parties at the lowest possible cost, excluding any charge for

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research and development.* The major objective of Article V from the non-proliferation standpoint is to reduce the incentives for indigenous PNE programs. Most of the foreign interest to date, however, has been in nuclear excavation projects, which presents a potential problem of compliance with the constraints of the Limited Test Ban Treaty. While the negotiating history of the NPT makes it clear that Article V is not inconsistent with the LTBT, the point is that the US and the USSR have not conducted any explosions for any other state and have apparently not fulfilled the expectations of a number of NPT parties pursuant to Article V. In formulating a position on PNE services, we are faced with somewhat of a dilemma. On the one hand, we wish to avoid charges that we are not acting in accordance with the spirit of Article V. Such charges could be cited as a justification for additional states to launch explosive programs. On the other hand, encouraging the use of PNEs, even within the Article V framework, might not serve our non-proliferation objectives, since this, too, could lead other countries to follow the example of India and demand their own national programs. Moreover, US experimental work has not proven the economic benefits of PNEs (although the USSR claims that it has projects which will be worthwhile). Similarly, we are

*The negotiating history of Article V made clear, however, that we considered (a) this understanding to apply when and if applications consistent with the LTBT restrictions proved economically and technically feasible and (b) that large scale excavation projects would require an amendment or other form of reconciliation with the LTBT.

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faced with a dilemma on the question of whether to provide preferential treatment to NPT parties since to do so would increase the incentive to join the treaty but at the same time could lead some NNWS remaining outside the treaty to resort to indigenous programs.

-- The range of options open to a state that is interested in PNE applications is rather narrow. If it is an NPT party, its only recourse is to obtain such services from the US or the USSR (the UK has not developed PNEs and the PRC apparently has not done so) as contemplated in Article V, or to obtain them from the French (who, to the best of our knowledge, have not yet developed this technology to any extent) or the Indians (who will have a very limited capability for some years). If the NNWS is not an NPT party, it can seek such services from the nuclear weapon states (but will presumably not be given the same priority by the US or USSR as non-nuclear NPT parties) or develop its own indigenous PNE capability.

-- Some agreements for cooperation and safeguards agreements contain a "PNE loophole" insofar as they contain guarantees by the recipient of nuclear shipments that such shipments will be used only for peaceful purposes or so as not to further any military purpose, but do not explicitly preclude the use of such shipments for PNEs. This is not a problem where the recipient is a party

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to the NPT, since such a recipient is bound by the treaty not to manufacture or otherwise acquire any nuclear explosive device. But where the recipient is not a party to the NPT (as in the cases of Brazil and Argentina, for example) further assurances may be needed, especially in view of disputes that have already arisen. The "PNE loophole" may be a potentially greater problem in the case of exporters which are neither NNWS or are not parties to the NPT, since they do not have the same legal obligations imposed by Article I of the NPT as the US, UK and USSR.

B. Factors Bearing on the Problem

1. PNE Programs of the Potential Suppliers

While the US has had a PNE developmental program for some time, this program has languished in recent years and the US has not yet developed the technology to the stage of commercial application. Nor has the domestic acceptability of PNEs been established in the US. Moreover, the US has no serious prospects of using nuclear excavation for domestic purposes and has virtually discontinued its program in this area. In contrast, the Soviets have an active PNE program, and a strong interest in PNEs which became apparent during the TTB negotiations. They have a particular interest in nuclear excavation which appears to stem mainly from a proposed

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project of substantial size -- the Pechora-Kama Canal. The Soviets claim to have reduced four PNE applications to practice, although other Soviet spokesmen have taken the position that PNE technology is still being developed and is not yet ready to be supplied to other countries.

It should be pointed out that the TTB follow-on negotiations on PNE may have an effect on what PNE services the US and USSR are able to provide third countries in the future. If an agreement on PNEs emerges which prohibits explosions above 150 kt in yield both countries will be unable to participate in large nuclear excavation projects, which are already subject to limitations imposed by the LTBT. On the other hand, the USSR might urge modification of the LTBT to permit high-yield excavation explosions. This could permit a wider range of PNE services. But LTBT erosion could harm non-proliferation by weakening an existing superpower arms control accord.

Finally, it should be mentioned that France has expressed an interest in providing PNE services. She is apparently not technically prepared to do so, however, and probably will not be able to do so for some time.

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2. Nature of PNE Technology

Some peaceful applications of nuclear explosions would require large numbers of very advanced nuclear explosives. For example, the nuclear excavation of a canal may well involve hundreds of thermonuclear devices. For this application the need for special thermonuclear devices is dictated by the need to minimize radioactive debris, some of which is necessarily released into the atmosphere by cratering applications of PNEs.

Other applications are possible with an unsophisticated explosive, but may then present questions of cost-effectiveness and acceptability. A fission device could be used, and may be best suited, for certain mining applications, i.e., in situ leaching. Tritium formation or release must be kept as low as possible, in contrast to use of a thermonuclear device. However, in other peaceful applications, such as over-burden removal, a fission device would create unacceptable contamination problems, at least by our standards. Storage cavities could also be created by fission devices, but their utility (except possibly for nuclear waste disposal) could be limited by the contamination problem.

As for oil and gas stimulation, they have virtually no utility for a country such as India which has little in the way of known deposits of these hydrocarbons. Moreover, where they are usable, their serious exploitation would involve large numbers of explosions and, where deep emplacement

was required, advanced designs

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Thus, laying aside the controversial question of whether PNE applications are both feasible and desirable from an economic and public acceptance point of view when compared to alternative ways of accomplishing the same ends, it is clear that deployment of a comprehensive PNE capability requires vastly more resources and know-how than the explosion of a single nuclear device.

3. Interest of NNWS in PNEs

Although the US and Soviet Union have on occasion been charged with failing to fulfill the expectations of NNWS pursuant to Article V of the NPT, it must be borne in mind that the interest of NNWS in PNEs has been limited. There seems to be little or no interest in PNEs in the industrialized countries such as Japan and most of the European states. This is probably attributable to the potential environmental problems that PNEs would present in heavily populated regions. France, however, has shown a particular interest in using them to produce underground cavities for off-shore oil storage -- a project which may prove of doubtful acceptability to other states in that region.

The interest shown by NPT parties and signatories has not been intense, although some countries such as Mexico have shown interest in the implementation of Article V. The only NPT parties which have shown an active interest

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in such applications are Australia (a proposed harbor study that was never conducted years ago and a suggested use for nuclear waste disposal cavities); Madagascar (a harbor in which they apparently lost interest); Thailand (a multi-billion dollar canal across the Isthmus of Kra); and Canada (a recent request from a Canadian company for examination of the feasibility of using PNEs to extract oil from Canadian tar sands). The most serious proposal by NPT signatories who have not yet ratified the treaty involves the excavation of a canal connecting the Mediterranean Sea with the Qattara depression in Egypt. Both the Egyptians and the Germans who have been assisting Egypt's feasibility study on this project have requested our assistance in evaluating this project. Of the NPT holdouts, other than India, Argentina and Brazil have been the most vocal about preserving the option to develop their own PNEs, but they are far from being able to conduct such a program at this time and it is impossible to determine if they have a genuine interest in PNE applications.

Thus, while we and the Soviets may be criticized for failing to meet the expectations generated by Article V, the desire for PNE services hardly seems to be a driving force among NPT parties or signatories. The main motivation to develop PNEs among NNWS would appear to be for prestige or as a guise for demonstrating a nuclear weapons capability.

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C. Approaches to the Problem

While an outright renunciation by the US of PNEs is a possible approach, it would present the following difficulties: (1) the Soviets would probably not be willing to renounce PNEs; (2) we would be likely to face complaints that we were reneging on NPT Article V; (3) we would be foreclosing at least temporarily a future option to utilize PNE technology if it is shown by others to have attractive applications; and (4) if a state were genuinely interested in PNE applications, it might lead that state to develop its own PNE program or to seek eventual help from France or India.

Assuming that the renunciation approach is not feasible or desirable, a possible approach to the PNE problem might consist of the following elements:

1. Closing the PNE Loophole

The US has made a start in this direction by the use of diplomatic notes at the time new Agreements for Cooperation with NPT holdouts were signed, by the statement which Secretary Kissinger authorized our IAEA representative to make at the June, 1974 meeting of the IAEA Board of Governors; by assuming implementation of the PNE preclusion in the guidelines issued by the Zangger (Nuclear Exporters') Committee, and by our recent reactions with respect to the Tarapur and CIRUS reactors in India. We should also initiate a review of existing agreements and

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given, and whether future steps to obtain them should be taken. Based on this review we should insist, in cases where it seems desirable to do so, on specific assurances from non-NPT parties that US-origin materials or equipment will not be used by a recipient in any nuclear explosive device. We should also insist on such assurances before entering into any new or renewed Agreement for Cooperation or contracts for the supply of nuclear materials or technology. In this connection, we should attempt to include a specific PNE exclusion in all such agreements.

We must also be concerned about other suppliers in this regard and we should seek to persuade other supplier countries to insist on specific assurances that nuclear assistance will not be used for PNEs. In this connection, prompt efforts to see that all commercial nuclear suppliers, especially France and including India as well, adhere to the Zangger Committee guidelines clearly seem advisable. We should also vigorously support the position of the IAEA Director General that all Agency safeguards agreements, not tied to the NPT, are to be interpreted as precluding PNEs.

The need to close the PNE loophole has become all the more necessary as a result of the decisions of the US and USSR not to openly criticize the Indian test. Generally speaking, a much stronger reaction was apparently anticipated and the lack of such a reaction may be increasing the temptation of certain NNWS to follow the Indian example.

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2. Take More Positive Posture Relative to Article V

As noted earlier, neither the US nor the USSR has provided PNE services to any state. The US has made public all available information on PNE applications (other than information relating to the design of the devices), and the Soviets have made available some information of the same sort. The US has provided some limited assistance in feasibility and pre-feasibility studies of PNE projects suggested by other countries. Most of these have been nuclear excavation projects, which present a potential problem of compliance with the provision in the Limited Test Ban Treaty on causing radioactive debris to cross international boundaries. Hence, as discussed above, our general posture on responding to requests for assistance relative to feasibility studies on excavation projects has been negative.

The principal arguments for going further and actually joining more readily in studies of proposed PNE projects, and, if particular projects appear feasible, actually carrying out a nuclear explosion for an NPT party in the relatively near future are that this position (a) would indicate to skeptical NNWS that the US and USSR are taking their obligations under Article V seriously and could be helpful in stemming criticism from NPT parties; and (b) would make the treaty more attractive to non-parties which are genuinely interested

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in obtaining PNE services, and thereby would tend to offset the argument in such countries that indigenous PNE development is required to ensure the availability of PNE services. It should be emphasized, however, that carrying out nuclear explosions pursuant to Article V would probably not influence a number of NPT holdouts (e.g., Argentina and Brazil) and could change public perception of nuclear weapons use as familiarity with PNEs increases.

An appropriate step in the direction of casting our Article V policy in a more positive form was AEC Chairman Ray's speech to the IAEA General Conference in September, 1974. In this speech she stressed that PNEs are "a highly complicated matter, with ramifications under the Limited Test Ban Treaty in the case of surface excavation, and with importance to the defining of the threshold and complete test ban treaties." She also emphasized the need for in-depth studies to establish the feasibility and desirability of using PNEs in a project. At the same time, she stated that the US stands ready not only to contribute to the planning and performance of such feasibility studies, but also to meet our obligations under Article V of the NPT to provide PNE services in cases where studies demonstrate the practicability of conducting a PNE project consistent with the provisions of pertinent treaties or agreements.

Using this statement as a point of departure, we should now increase our efforts to develop and use PNEs.

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applications and, in addition, the practical limitations and potential problems associated with PNE applications. This should be our approach to the IAEA panel meeting in January. Meanwhile, if we are challenged as to why no PNE services have yet been provided we should respond along the lines taken by Soviet Ambassador Roshchin at the CCD on August 8, 1974 when he stated that (a) the technology of PNEs has not been adequately developed; (b) no practical need for PNE services has been demonstrated; and (c) significant preparatory work for the implementation of Article V has not been done in the IAEA.

In connection with Ambassador Roshchin's last point, we can refer to certain recent steps taken by the IAEA which will complement a more positive approach by the US relative to Article V. At the Agency Board of Governors meeting in September 1974 initial procedures were approved for the Agency response to requests from members for such services. Also the Board authorized the Director General to establish within the Secretariat, at a suitable time, a separate organizational unit for implementing PNE services. These steps are helpful because they represent further apparent movement forward relative to implementation of Article V and tend to strengthen the argument that the IAEA should be the international body involved in such implementation. We should consider the need for further procedures which could be recommended at the February meeting

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of the IAEA Board of Governors.

3. Consultations with USSR. Because the US and USSR are the only potential suppliers of PNE services at the present time, it is important that we continue to compare notes with them on how we plan to deal with the implementation of Article V in the coming year. It would be undesirable for the two supplier states to be working at cross purposes, especially in the months preceding the 1975 NPT Review Conference.

Such discussion could expore (a) the recent Soviet proposal for joint US-USSR PNE projects; (b) how the state of PNE technology should be characterized (i.e., should we agree that services relative to certain applications are ready to be offered); (c) the possibility of permitting observation by the IAEA or NNWS representatives of PNE events in the US and USSR; (d) the possibility of offering to supply PNE services to non-NPT parties (we have already made such an offer in the case of parties to the Treaty of Tlatelolco); (e) the proposal by some NNWS that PNEs be provided without charge to LDCs; and (f) the indemnity problem (i.e., who pays for third party damage resulting from PNEs).

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4. Discuss Limitations of PNEs. International discussions of PNEs have been conducted largely by proponents of such programs, and have tended to stress their potential benefits. There has been relatively little discussion of the potential problems involved, such as (a) those associated with the radioactive debris from nuclear excavation applications, (because of a lack of consensus within the US Government on how to handle the LTBT related aspects of this problem), or (b) the disappointing results from our last gas stimulation experiment. Fuller discussion about such problems might help to moderate the expectations of NPT parties and others who have shown an interest in PNEs -- and PNE services in particular -- and put the Indian explosion in perspective. Here again, however, advance coordination with the Soviets on handling this problem seems necessary to avoid the confusion that could be caused by inconsistent approaches. Moreover, as noted above, we should seek to have this aspect of PNEs, as well as their potential benefits, discussed at the IAEA panel in January.

5. Seek to Devise Controls on PNEs. It is inherently impossible to permit device development for PNEs that does not have a carry-over to nuclear weapons development. In

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NSSM 128, an elaborate system was suggested for monitoring PNE applications of existing types of nuclear explosions to minimize the risk that their use in PNE projects could advance nuclear weapons technology. But this system presupposes that optimal devices for PNEs have already been developed -- a situation which clearly does not now obtain in India, and one which we would not like to see, since it would be tantamount to an advanced nuclear weapons capability. If the Indians were confined to use of devices such as their initial one, they could carry out only a limited PNE application.

The arrangements for observation of PNE applications thus far worked out by the IAEA are not really suitable for "safeguarding" independent PNEs, since they were designed to ensure that the nuclear weapon state conducting the explosion did not release custody or control of the device to the host state. In the Indian case, this could only apply if India conducted an explosion in another country, which, as indicated above, it is unlikely to do for some years. While such observation arrangements would also provide some evidence that the explosion was carried out in a manner consistent with the declared peaceful purpose, they would not affect India's use of such explosions to further its nuclear weapons technology.

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While it is difficult to conceive of truly adequate controls on PNEs, consideration might be given to measures such as the following designed to provide some assurances in the Indian case. It is unlikely that India would be willing to accept such measures.

1. Provision would be made for IAEA safeguards on all Indian facilities unless and until material was specifically withdrawn for the declared purpose of fabrication into a PNE, and such declaration would be accompanied by a formal guarantee to the IAEA that neither the material involved nor the PNE when completed would be used for any military purpose.

2. Such an arrangement might further provide for special controls such as the following on any material so withdrawn:
 - (a) continuous accountability for the material except when actually in the process of fabrication into the device; (b) immediate notification to IAEA on completion of the device, together with an opportunity to verify the amount of nuclear material in it (this would, however, require the revelation of some design information); (c) IAEA sealing of the device and monitoring of its storage pending its actual use, although custody and control would remain with India and appropriate precautions would have to be taken to avoid revelation of design information; and (d) advance notification of the purpose, time, and location of any

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intended explosion of the device, which would be subject to international observation, and related arrangements comparable to those which the NWS have agreed to accept in the case of PNE services they provide under Article V of the NPT.

It should be underscored, however, that the only purpose that controls on the Indian program could serve would be to provide some accountability for the material devoted to this use, possibly accompanied by undertakings that nuclear explosions would not be stockpiled or deployed for military purposes. These procedures would not constitute a technically sound basis for "distinguishing" between PNEs and weapons or alter the fact that, in effect, India is a nuclear weapon state, and it is doubtful that such schemes can be found in the case of a fledgling nuclear power. Apart from their limited objective, the problem with such controls and assurances -- even if the Indians would accept them -- would be that they would constitute internationally accepted procedures that would appear to legitimize PNEs in India, and thus encourage indigenous PNE development by NNWS such as Pakistan, Argentina and Brazil, while leaving NPT parties bound not to develop them.

6. Consider Proliferation Implications in Negotiating TTB Procedures. There is an interaction between the recently-negotiated Article III TTB provision and the effect of PNEs

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on non-proliferation which goes beyond the possible impact of a PNE agreement on nuclear excavation as discussed in B above.* Procedures permitting US and Soviet PNEs above the threshold, which are applicable only to NWS in the context of the TTB provisions limiting weapons tests, could be seen as providing precedents for observation of indigenous PNEs in relation to NNWS and India. Hence, there is a risk that our acceptance of such mechanisms might tend to (a) weaken our position that PNEs cannot be technically distinguished from nuclear weapons; (b) legitimize India's claims regarding its program; and (c) encourage NNWS contemplating following India's example. Therefore, the US and the USSR should design and publicize TTB procedures in such a way as to counter these tendencies. More generally, we need to orchestrate our PNE policy relative to the TTB with our non-proliferation policy, so that the former will complement or at least not undermine the latter. The US has pointed out that, while an adequate distinction between nuclear weapon tests and PNEs is conceivable in an advanced nuclear weapons state, such a distinction cannot be made with respect to a NNWS. Over the longer-term, a comprehensive test ban treaty would, in order to be verifiable, either have to prohibit

*See study on PNEs by the Verification Panel Working Group on the Threshold Test Ban Treaty (September 10, 1974) and the USC study, Modification of the Limited Test Ban Treaty (September 13, 1974).

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PNEs or make some special provision for the use of existing types of PNE devices, since device development could not be permitted under a CTB without creating a loophole for weapons development.

D. Summary

A proposed US PNE policy consistent with non-proliferation might consist of the following elements:

1. Press all nuclear suppliers to obtain explicit assurances from non-NPT countries that nuclear imports will not be used for any nuclear explosive purposes.
2. Take a more positive stance with respect to implementing Article V of the NPT, but be prepared to highlight the limitations as well as the potential benefits of PNE.
3. Examine further the question of whether special measures can be devised to help provide assurance that PNE devices produced by India or other non-nuclear weapons states could be accounted for and would continue to be channeled to peaceful uses.
4. Make certain that our evolving PNE policy relative to the TTb is not inconsistent with our non-proliferation policy.

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V. COUNTRY APPROACHES

Contacts by the US with key countries form the practical foundation of a non-proliferation strategy -- both by initiating multilateral supplier efforts and by diminishing NNWS incentives to develop a nuclear explosive capability. The following discussion outlines the rationale for such approaches, indicates the factors likely to influence the outcome of such approaches, and highlights questions of procedures and timing. Obviously, these approaches on non-proliferation must be seen in the larger context of relations with the nations concerned. But the specific actions proposed are believed to be essential to non-proliferation and probably achievable without excessive risks or costs.

In view of their recent nuclear test, discussions with India play a vital role in our global non-proliferation strategy. Contacts with the USSR on non-proliferation policies are also crucial, as is dealing with France on the key issues of export controls. US policies towards Japan, the FRG, and Italy, who have signed the NPT and whose ratification is important, must be considered. Finally, we must formulate positions towards nations, such as Israel, Egypt, Brazil and Argentina, who are likely to remain outside the treaty.*

*This list is not exhaustive, and a series of non-proliferation "country-studies" would be valuable. No approach to the PRC is included. While the PRC has criticized the NPT as a US-Soviet condominium, it is not a manufacturer of commercial nuclear equipment, and has not been an exporter of nuclear materials. Notwithstanding its negative stance on the NPT, the PRC would appear disinclined to contribute to the further spread of nuclear explosives.

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A. India and Pakistan*

The potential adverse impact of the Indian test on non-proliferation is of three kinds: the Indian explosion provides an additional argument to opponents of the treaty in states where ratification is under consideration; it makes the indigenous PNE route look more attractive, especially in view of the lack of any severe response by the world community; and it raises the issue of India contributing directly to proliferation through nuclear exports. In addition, real or perceived movement by India towards a direct military nuclear program can exacerbate proliferation problems, regionally and worldwide.

In dealing with India it should be recognized that strong measures directed against the Indian nuclear program might create resentment on the part of the Indians which could harm non-proliferation efforts by making more difficult our efforts to deter the Indians from expanding their nuclear explosives program and to induce them to adopt a safeguarded nuclear export position. On the other hand, acceptance of the Indian action, suddenly treating India as an advanced nuclear state, or condoning its "peaceful uses" rationale could have the effect of encouraging other nations to follow the Indian route. In fact, the failure of the US and USSR to react negatively to the Indian test has probably already had this effect to some degree.

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Economic considerations will make it unlikely that India will develop a large arsenal of sophisticated explosives or a long-range delivery system in the next decade, and export control efforts aimed at restricting their development of such delivery capabilities could help keep the Indians from becoming a strategic nuclear power.* Insofar as long-range bombers are involved, we could consult with the Soviets, who are the only other suppliers of such bombers. With respect to missilery, we would seek to impose, and seek to have other suppliers (notably France) impose, appropriate limitations on international cooperation with India -- prohibiting for example, assistance in inertial guidance.

There is probably nothing we can do that would compel India not to use the unsafeguarded plutonium it has accumulated (enough for 10-15 explosives) for further nuclear explosives, although it is likely that time is needed to evaluate the results of each experiment and plan the next accordingly. The only circumstance under which Mme. Gandhi recently declared India would be prepared to give up nuclear testing would be if all NWS did so. This appears to mean not only a CTB, but cessation of French and Chinese testing, and possibly with no one retaining the right to perform PNEs.

These considerations lead to the more general question of whether there is some constructive approach to deal with

*See Interagency Intelligence Memorandum, Prospects for an Indian Nuclear Force (June 19, 1974)

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India, or any state which maintains that it is developing nuclear explosives purely for peaceful purposes. What should be sought is a way to hold them to their declared policy, while avoiding giving them a status that would be attractive to others who might be tempted to follow their example.

1. NPT Ratification. Even if India wished to do so, it would be neither possible nor desirable for India to join the NPT as a nuclear weapon state:

- The NPT defines a nuclear weapon state as one which had manufactured and exploded a nuclear explosive device before January 1, 1967, and thus would have to be amended and resubmitted to over 80 legislative bodies.
- The treaty does not prohibit a nuclear weapon state from developing nuclear weapons or other explosive devices.
- The treaty does not require safeguards in a nuclear weapon state or on exports to nuclear weapon states.

On the other hand, joining the NPT as a non-nuclear weapon state would require India to forswear the further development of indigenous PNEs, and thus reverse the policy which it has proclaimed to the world at considerable political cost. Moreover, a NNWS party to the treaty has an obligation not to assist NNWS in the manufacture or acquisition of nuclear explosive devices,

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and nuclear materials and equipment provided to a NNWS by any party must be subject to safeguards.

2. Safeguarding the Indian Program. Renewed efforts should be made to persuade India to put all its peaceful nuclear activities under safeguards (including a tightening up of the Canadian-Indian agreement covering the Rajasthan reactors), although it has gone to great pains to avoid this result in the past. In addition to this general reluctance, there is the problem of whether "safeguards" on India's PNE program would be of any value. A conceivable approach might consist of the following elements:*

(a) applying external safeguards on all of India's chemical reprocessing plants. This would establish the amount of plutonium produced, but would not preclude the use of this material as necessary for designated explosives applications or for reactor fuel. Accounting for the disposition of such plutonium would also be required.

(b) limiting production of nuclear explosive devices to those needed for specified PNE experiments or applications, providing notification of such production, and keeping such devices in sealed storage pending their movement to the site of the PNE application;

(c) accepting the observation arrangements worked out by the IAEA for explosion services performed by nuclear weapon states for NNWS, which include observers accompanying the device to the site, and observing site preparation, emplacement

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and detonation.

In the likely event that India could not be persuaded to put all its peaceful nuclear activities under safeguards, with special provisions for PNEs, it might at least be possible to maintain accountability for any devices produced up to the time of their actual detonation in an internationally observed "peaceful" application. While this might hinder any hostile use of the explosives, it would not prevent development of an Indian nuclear weapons capability. It would have a major disadvantage in that it would establish a pattern that would make it legitimate for NPT non-signatories to follow the Indian example, while NPT parties are precluded from doing so.

3. Export Controls. One provision of the NPT that is applicable to both nuclear and non-nuclear weapon states is Article III (2), which obligates all parties to require IAEA safeguards on their exports of nuclear materials and equipment to non-nuclear weapon states. Indian adherence to an undertaking such as this would obviously be desirable, since it would help reduce the risk that India would become a source of further proliferation; but India might well object even to this on two grounds:

(a) it requires them to discriminate between exports to NWS and NNWS, which is a feature they have criticized in the NPT; and

(b) they would be unlikely to accept the proposition that such safeguards must ensure

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that their exports were not diverted to PNEs, since this would be inconsistent with their public stance in favor of indigenous PNEs; and safeguards not based on that proposition would be an invitation to proliferation.

The first of these problems could be solved by providing for safeguards on India's exports to nuclear weapon states as well as NNWS. (The Indians insisted on reciprocal safeguards rights in their agreement with the United States, as well as that with Canada, and they are unlikely to make nuclear exports to the USSR, where this could present difficulties.) The second problem is more intractable, for the reasons cited above.

While consideration might be given to inviting the Indians to join the Zangger (Nuclear Exporters) Committee, there are several strong counter-indications:

(i) That committee is the principal instrument for ensuring that appropriate conditions are placed on exports to India and other NPT holdouts; (ii) India could destroy the consensus that has been reached in that committee that exports must be conditioned on no diversion to PNEs; and (iii) India is unlikely to become a large enough supplier of nuclear materials and equipment to justify accepting the preceding disadvantages.

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4. Undertakings Against Military Use. Another approach would be to seek to codify the Indian pledge that it would not use its nuclear explosives for any military purpose. There is some indication that the Latin American countries may seek to obtain Indian adherence to Protocol II to the Latin American Nuclear Free Zone Treaty. This would entail a pledge by India not to contribute to any violation of that treaty (although Argentina and Brazil are not yet bound by that treaty and maintain that it does not proscribe indigenous PNEs); and not to use or threaten to use nuclear weapons against parties to the treaty. To maintain consistency with its stated position, India would presumably have to couple its ratification with a statement that it did not intend to acquire nuclear weapons.

Whether a more generalized pledge of this sort -- e.g., one that covered Pakistan, could be made should also be explored. The disadvantages of these courses of action is that they would accord India the prestige of being treated as a nuclear weapon state and would tend to undermine our ability to maintain that there is no distinction between PNEs and nuclear weapons.

5. Pakistan. The most urgent problem in minimizing Pakistan's proliferation potential is to try to prevent Pakistan from acquiring an indigenous chemical reprocessing capability (from which it could produce weapons grade plutonium) or from

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acquiring weapons grade materials from others. It is currently seeking to obtain such a reprocessing plant, and has approached the US, Japan, France, Belgium and perhaps others. It also appears to be seeking plutonium from the PRC, although we believe the PRC would be most reluctant to commit itself to the supply of plutonium or equipment for a Pakistan PNE. (In an effort to placate the Pakistanis, the Chinese have made a public statement of support for Pakistan against nuclear blackmail and Bhutto has interpreted this as a Chinese nuclear umbrella.) Immediate efforts to persuade the potential suppliers to withhold such assistance, and to offer Pakistan an alternative method of reprocessing its nuclear fuel abroad (which would make more commercial sense), with special provisions for its storage, seem required.

A consensus could be developed in the Zangger (Nuclear Suppliers) Committee that no member would supply Pakistan with an indigenous reprocessing plant or technical assistance in building one. Technical assistance and training of Pakistanis in reprocessing or aspects of nuclear technology relevant to explosives could be avoided. We could also make efforts to ensure that all nuclear activities in Pakistan are safeguarded against use in any nuclear explosive.

On the political side, Pakistan's motivation to acquire nuclear weapons could be reduced by satisfactory guarantees by India that it would not produce, stockpile, or deploy nuclear explosives for military purposes and would not use or threaten to use such explosives against Pakistan. (Such a guarantee might be a mutual one, and might also commit each party to the functional equivalent of certain NPT provisions. Another possibility would be accountability controls

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on PNEs of the type mentioned above. If any further security assurances, or even air defenses, could be obtained from the superpowers, this would also seem helpful. One other step which would at least help insure that Pakistan did not conduct atmospheric nuclear tests would be its ratification of the LTBT, which it has only signed to date.

B. France and Other Key Suppliers

A French commitment to follow nuclear export policies similar to that of other major exporters is a major requirement for success of our non-proliferation efforts, since France is capable of exporting the whole range of nuclear material and equipment, including highly enriched uranium, reactors, reprocessing plants, and enrichment technology. Without such a commitment other suppliers are unlikely to be able to agree on restraint. France is also capable of providing assistance on advanced nuclear delivery systems, including ballistic missiles.

1. French Policy. Stated French policy is to act as a party to the NPT, but this has not been reiterated at a high level in the last few years. French officials at the IAEA have told US officials that safeguards (bilateral or IAEA) were placed on all French exports of special nuclear material as a condition of export. The French record on safeguards and export controls, however, does not support this claim; France, for example, has not joined the Zangger Committee (the nuclear suppliers group discussion of how to implement the NPT obligations to export only under IAEA safeguards).

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In fact, France has, after over two years of approaches from the other Euratom members, still not given even the modest assurance that safeguards will be required on nuclear material received from them and subsequently re-exported.

We do not know what safeguards duration and other provisions the French require on exports. France has apparently not required safeguards on a 480 mwe power reactor provided to Spain, and did not require the application of safeguards on the Dimona research reactor supplied to Israel. The French reactor sale to Iran has unknown controls but is probably not a problem since Iran is an NPT party and therefore obliged in any case to accept IAEA safeguards on any nuclear installations. No decision has been made by France on constructing fuel re-processing, fabrication, or plutonium storage facilities in Iran. South Korea has ordered two power reactors from France with no evidence thus far of safeguards requirements.

France plans to provide substantial assistance to the Indian nuclear capability through agreeing to build heavy-water plants and an experimental breeder reactor. There is an immediate problem of whether safeguards will be placed on French shipment of 400 kg of highly-enriched (weapons grade) uranium to India for use in a fast breeder reactor. At this stage, French spokesmen have indicated that they will insist on bilateral safeguards, at least on the initial HEU

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loading and plutonium output, as well as for highly-enriched fuel shipments.

Finally, France has not taken a clear position on the question of whether use of nuclear assistance for "peaceful" nuclear explosives is prohibited under cooperation agreements or sales. It has not, for example, allied itself with the US position and the IAEA Director General's position to the effect that PNEs would be prohibited. The French as a potential supplier of PNE services have not expressed interest in cooperating with the US and the USSR in considering international service arrangements.

The French have an obvious interest in maintaining their special status as a nuclear weapon state, and in not having it eroded by others, particularly in Western Europe. They would especially not like to see Germany or Italy become a nuclear weapon state. They have publicly declared their opposition to proliferation and stated that they would behave as if they were a party to the NPT. On the other hand, they have declined to participate in any cooperative efforts in the non-proliferation field.

Informal soundings with the new French Government indicate that they may have been sobered by the Indian event and might well be interested in discussing export control problems with us. They may even be willing to consider joining the

multilateral efforts to strengthen and standardize international

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safeguards -- whether through informal consultations or a conference of nuclear industrial states. However, bureaucratic opposition to, and suspicion of, multilateral initiatives remains strong and rethinking on the part of France will have to be motivated from the highest levels. Thus, contacts with high level officials will be important to maintain momentum. In any event, we may find it difficult to get French acceptance across the board for controls and safeguards of all nuclear exports (i.e., Zangger Committee). French cooperation may, for example, not go so far as willingness to impose IAEA rather than bilateral safeguards or exports in all cases. We should nevertheless make the try and, at a minimum, obtain a commitment from the French that they will apply IAEA or equivalent safeguards for all exports of fissionable material and ban PNEs. Of particular importance is the need to ensure that France will not undercut efforts to contain the Indian program and assist potential Pakistani and Argentine-Brazil proliferation. With respect to physical security requirements, the French are highly conscious of the risk of terrorist activities, but might be reluctant to associate themselves with precise supplier criteria or an international convention.

French political and financial investment in the projected EURODIF uranium enrichment plant gives them a strong commercial incentive to head off the building of indigenous enrichment plants elsewhere. It also should interest them in preventing indigenous reprocessing plants that could lead to the use of recycled plutonium and natural uranium as a substitute for enriched uranium fuel.

The French still need US technological assistance in the nuclear field, particularly in the near term. This need, as well as

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potential bargaining chip for the US. For the next five years, the French need continuing supplies of highly enriched uranium (HEU) from the United States. We have evidence that they are very much aware of the need to avoid action which will lead us to cut off this supply. (This is particularly relevant to their impending supply of 400 kg of HEU to the Indians. They would not be in a position to make this supply unless they could count on getting more than that amount of HEU from us.)

3. Other Suppliers. If French cooperation can be achieved, there is a good chance that suppliers' consultations on safeguards can be successful and a productive suppliers' conference held. The Zangger Committee guidelines can continue to be highly effective in securing safeguards on nuclear activities of non-parties to the NPT, especially if the key NPT signatories complete their ratification of the Treaty in the next few months.

Consultations will be required with URENCO (UK-FRG-Netherlands) and with the following major nuclear exporters: Japan, FRG, Canada, Italy, Belgium, Netherlands, Sweden, Switzerland, and South Africa, as well as the USSR and India. Most of these states (with the possible exception of India) would be expected to support the objectives of: encouragement of multilateral reprocessing and enrichment plants; development of common principles regarding export of enrichment technology; common guidelines on exports to countries in

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sensitive regions; and strengthened physical security measures against theft of nuclear materials.

C. The Soviet Union

The most important country from the standpoint of US non-proliferation policy is the USSR. Continued dedication of the Soviets to the objective of non-proliferation is a prerequisite to a meaningful US non-proliferation policy. The Soviets have an obvious interest in not having their status as a nuclear-weapons state diluted and have been strong supporters of non-proliferation efforts, including international safeguards and the IAEA itself, export control measures, and preventing non-nuclear weapons states from acquiring independent nuclear explosives. As reflected in the joint communique at the last Moscow Summit, the USSR strongly supports the NPT, and has a good record of cooperation with the US in implementing the treaty. As principal co-sponsor of the treaty, the Soviets are aware of our common interest in taking steps before the NPT Review Conference in May 1975 to increase the coverage and effectiveness of the Treaty as a non-proliferation instrument. Soviet representatives to the IAEA have raised concern over the mutual need to make the NPT more attractive to potential parties through preferential treatment in commercial nuclear sales and services.

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While the USSR's tendency to view non-proliferation as another ingredient of a joint Soviet-American condominium can pose problems for the US in terms of alliance relations and relations with the PRC, the Soviets have recently shown increased awareness of the need for concerted multilateral action on the part of nuclear suppliers. With the US as intermediary, the USSR has participated constructively in efforts by the Zangger (Exporters') Committee to devise agreed guidelines on a list of nuclear-related items that would "trigger" IAEA safeguards, has urged that the general guidelines be made public, and has agreed to exchange diplomatic notes with the other Committee members affirming this commitment. The Soviet Ambassador to the IAEA recently expressed interest in the status of efforts by EC members to obtain French cooperation in the Zangger exercise. It is likely that the Soviets would support proposed US plans for multilateral supplier consultations and a conference of nuclear industrial states as a means of improving and extending export controls.

On the question of India and the issue of PNEs, elements of the USSR's position are not in complete concurrence with ours. Although the Soviets have not made a public statement about the Indian test and the Soviet press has stressed the "peaceful" character of the Indian explosion, the Soviets are surely aware of the damage the Indian test can do to the NPT and has done to non-proliferation efforts in general, and

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the impact their own actions will have. The Soviets recognize that it is impossible for a non-nuclear weapons state to develop a PNE capability without at the same time acquiring a device which could be used as a nuclear weapon. Nevertheless, in seeking to minimize the adverse non-proliferation consequences of the Indian test and to strengthen the NPT, the Soviets will probably wish to continue to do so in ways that will not imply criticism of India.

The USSR appears interested in taking a positive stance on provisions of PNE services to other states, consistent with Article V of the NPT and based upon procedures being developed by the IAEA. This policy is obviously related to the Soviets' intense interest in using PNEs for a variety of applications in the USSR itself and devising arrangements under the TTB to permit peaceful explosions over the 150 kt threshold. On the other hand, while accepting the need to re-examine the issue of PNE services at this juncture, our investigations have made us skeptical about the feasibility of PNEs. Finally, the USSR's interest in excavation will create pressure to amend the Limited Test Ban Treaty (LTBT), which we believe would hurt arms control and non-proliferation generally.

In sum, our non-proliferation objectives with the USSR should be to:

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1. Coordinate approaches with the Soviets and others on possible steps that could be taken in the near future to obtain NPT ratification by important nations (such as Japan, the FRG, Italy, as well as Egypt and Israel) and generally to make the NPT more attractive (including a possible Soviet contribution, matching those we have already made, of low enriched uranium to the IAEA for distribution to developing countries) and discuss how to handle policy issues likely to arise at the NPT Review Conference.

2. Elicit continued Soviet support for concerted action on nuclear export controls, and test their specific interest in a meeting of key suppliers for the purpose of developing common transfer policies by the nuclear industrial states, including France.

3. Ensure that the Soviets will not undercut the non-proliferation measures we are proposing for India, including possible steps to "contain" the Indian PNE program, and especially that they will not furnish assistance that we may withhold for leverage purposes. We should also ascertain whether the Soviets, the only other potential supplier of long-range bombers, would agree to abstain from supplying such bombers to India and thus restrict its delivery capabilities and reduce its incentive to develop a nuclear force.

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4. Seek to shape the Soviet position on handling PNEs under the TTB to take account of the non-proliferation problems inherent in modifications of the LTBT and any "legitimization" of US-Soviet PNE programs -- a key issue being whether nuclear excavation explosions over 150 kt will be provided for or prohibited.

5. Ensure that the Soviet approach to Article V of the NPT is in consonance with ours. We should urge that international discussions of PNEs include adequate treatment of the limitations and problems involved, including radiation from nuclear excavations, costs and economic aspects, the numbers of explosions involved for meaningful exploitation, and the legal liability problem.

D. Japan and Other Key NNWS

Of the NNWS that have signed but not yet ratified the NPT, the most crucial to its success is Japan, but ratification by the FRG and Italy is also essential. These are among the most advanced civil nuclear powers not already bound by the NPT and include all major nuclear exporters other than France and present parties to the NPT. Their ratification would confirm their political commitment not to go nuclear themselves, provide complete safeguards coverage of their nuclear industry, and provide a commitment to require safeguards on their nuclear exports to any NNWS.

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Of the non-signatories to the NPT with capacity in the nuclear field, Spain is the one with the largest and most advanced civil nuclear industry, but has no apparent motivation to go nuclear. South Africa will become important, principally because of the large uranium enrichment plant it now has under construction, but also because of its possible motivation to develop a nuclear weapon capability. Adherence to the NPT by these two countries, for which we are one of the principal suppliers of reactors and, for the present, of nuclear fuel, would strengthen non-proliferation efforts.

Among other NNWS not presently judged likely to join the NPT, Israel and Egypt, as well as Argentina and Brazil, are countries of particular importance in terms of preventing further nuclear proliferation outside the Treaty.

1. Japan. The GOJ signed the NPT in 1970 and has recently reaffirmed publicly its intention to submit the Treaty to the regular 1975 session of the Diet for ratification. While significant opposition to ratification still exists in Japan and within the ruling Liberal Democratic Party, the Government is firmly committed to ratification and will probably, but not certainly, obtain Diet approval.

US action (or inaction) has and will continue to have an important bearing on the non-proliferation issue in Japan. In recent months, the muted US reaction to the Indian nuclear test and our decision to sell reactors to non-NPT parties in the

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Middle East, have led Japanese to question US support for non-proliferation. An active and visible US commitment to further efforts in the non-proliferation field would provide the Japanese and others convincing evidence of our continuing commitment to this policy. The US should take opportunities in advance of Diet consideration, to reaffirm at the highest level US support for the NPT system and the belief that Japanese ratification would be important contribution to international confidence in non-proliferation and to the easing of international tensions. We have recommended that the President discuss our concern on this question during conversations with Japanese leaders. Silence on this issue would be read by the Japanese as official US indifference or even opposition to Japanese ratification.

Although the question of preferential treatment for NPT parties is still under consideration by the US, we could point out the fact that NPT status is already one of the key factors taken into account by the US in deciding on whether to license countries in foreign fuel enrichment, reprocessing, or fuel fabrication activities. Other proponents of the NPT would also be urging early Japanese ratification as part of our multilateral strategy. It will be imperative to avoid preaching to the Japanese, but rather to stress the fact that the NPT can obviously serve Japan's self-interest for codifying a national decision

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to forego nuclear weapons and by giving impetus to a worldwide pattern favoring the NPT and rejecting independent nuclear forces as a sign of strength.

Japan has thus far cooperated fully in the Zangger Committee, and there is little doubt that Japan will insist on IAEA safeguards on its commercial exports, even while it remains a non-NPT party. However, we should discuss with the Japanese:

(1) Our overall non-proliferation policy, and particularly the need to enhance the effectiveness of worldwide nuclear safeguards first by working toward obtaining cooperation from all major suppliers (notably France) possibly through a conference of nuclear industrial states;

(2) Our plans to conclude negotiations with the IAEA on our voluntary offer, noting the need for such NPT safeguards to come into effect simultaneously in the US, Japan and the key EURATOM countries.

(3) The need for common supplier export controls to include withholding especially sensitive materials from unstable regions and imposition of proper physical security guidelines to guard against sub-national theft and hijacking. (A particular case in point might be the terms of possible Japanese peaceful nuclear cooperation with Brazil.)

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2. Italy and the FRG. The Italian Foreign Office is causing Italy to drag its feet (using as one argument our apparent loss of interest in their ratification). In discussions with Italy, we could point to the desirability of removing any legal doubts about our ability to continue our nuclear cooperation with the EC.

It is important that we coordinate our approach to Italy with Germany (and the Netherlands), both of which have a strong interest in obtaining Italian ratification, in order to remove any legal doubts about their own ability to obtain further nuclear fuel supplies through the EC. We might also tie our approach to our discussion of ways to help Italy out of its financial crisis.

FRG accession to the NPT is important not only because of its own nuclear capabilities, but also because of its importance as a supplier of materials and technology to countries such as Argentina, Brazil and India.

The German Parliament has approved NPT ratification, but it has not brought the Treaty into force, preferring to await ratification of the NPT by all other EURATOM members. Thus continued Italian delay in completing the ratification of the treaty by other EURATOM states.

For the FRG as well as Italy, it is important that we complete negotiations of our agreement with the IAEA implementing the

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Presidential offer to permit the IAEA to safeguard peaceful US facilities, in order to demonstrate that we not seeking a commercial advantage over NNWS by avoiding safeguards.

We could again point out the fact that NPT status is one of the factors taken into account by the US in deciding on whether to license assistance in foreign fuel enrichment, reprocessing, or fuel fabrication activities, and also (if declassified) with respect to HEU. Thus, NPT adherence will facilitate our cooperation in certain advanced aspects of nuclear commerce.

3. Israel and Egypt. Israel has neither signed nor ratified the NPT, and a nuclear weapons potential exists in the unsafeguarded output of the French-supplied Dimona reactor. Egypt has signed and indicated that ratification would follow an Israeli decision to join the Treaty. Israel has already stated that it would not be the first to introduce nuclear weapons in the area, and while no clear evidence of a changed attitude toward the NPT has emerged, Israeli officials have indicated that their NPT position is being reviewed.

A framework for a parallel non-proliferation approach to Israel and Egypt can be found through the negotiation of the agreements permitting sales of US power reactors and fuel to both countries. If successfully negotiated, the diplomatic note associated with the Agreement for Cooperation would

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result in two significant steps toward non-proliferation:

-- It would obtain confirmation by both countries that material or devices supplied by the US would not be used for any nuclear explosives, thus explicitly closing the PNE "loophole". Both nations could probably be brought to accept this condition. (Egypt has, however, expressed interest in obtaining PNE services.)

-- It would commit both sides to assure that all future nuclear facilities or materials entering their country from any source would be subject to IAEA safeguards and would not be used for any form of nuclear explosives. While this would not lead to safeguards on all facilities in both countries (and would leave Dimona products untouched), it would essentially represent a functional equivalent to an NPT obligation covering the bulk of each nation's nuclear power programs.

Acceptance of this "partial NPT" agreement by Egypt and Israel could, in turn create the conditions for official NPT participation within the next few years. If this pattern is confirmed it might be encompassed within a Mid-East Nuclear Free Zone which has been proposed for consideration by Iran and Egypt and which undoubtedly will be discussed in detail at the UNGA, the CCD in Geneva, and elsewhere.

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4. Argentina and Brazil. Argentina is the most advanced nuclear power in South America, and even has a small pilot chemical reprocessing plant. Brazil is a close second. Both appear to be seeking independence of foreign controls for their nuclear programs and are emphatic about their right to develop indigenous PNEs. Argentina may be close to achieving a complete nuclear fuel cycle independent of safeguards. Both countries are unlikely to join the NPT, and our strategy must operate in other directions in an attempt to deter these countries from following the Indian path of (a) avoiding or prematurely terminating international safeguards on their facilities, (b) acquiring an indigenous capability to produce weapons grade nuclear materials, and (c) developing nuclear explosives ostensibly for "peaceful" purposes.

Since both countries are still dependent on imports to sustain their nuclear activities, non-proliferation objectives can best be achieved through concerted action by potential suppliers (including, in this case, India). In negotiating a safeguards agreement with the IAEA covering the second power reactor in that country to be supplied by Canada, the Argentines have been insisting that the agreement be of limited duration. They did not receive much support for this position at the recent IAEA Board of Governors meeting, however. We

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should continue to insist on the safeguards agreement between the IAEA and Argentina being of satisfactory scope and duration, and enlist support for that position. Proposed action by the IAEA Board of Governors to establish that materials subject to non-NPT safeguards, as well as those subject to NPT safeguards, may not be used for PNEs may also be helpful in inhibiting PNE programs.

A specific goal would be to head off acquisition of a national uranium enrichment or chemical reprocessing capability by Argentina or Brazil. Achievement of this objective depends on being able to offer an attractive alternative way of meeting their future reprocessing needs, and this will require consultations among potential suppliers of such services or an initiative by the United States to establish a multinational facility. In discussions, we can point out it would be economically disadvantageous for either country to build a national chemical reprocessing plant to service only a small number of nuclear reactors. We also might encourage Brazil and Argentina to consult with each other for the purpose of avoiding competition in building nuclear explosives.

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